

American Aviation

SEPTEMBER 4, 1950 25c

THE AIR
INDUSTRY'S
PIONEER
INDEPENDENT
MAGAZINE

It's Brighter

THE OUTLOOK on the Pacific airlift has taken on brighter colors. Unless another emergency arises elsewhere in the near future, the chances of further requisitioning of airline planes have diminished considerably. Even a few planes still undergoing conversion for Pacific duty were turned back to the owners.

A semblance of order has now appeared. For one thing MATS is now fully on the job—a role it should have had from the start. No better men than Major General William H. Tunner, deputy commander of

MATS and a veteran of the Hump and Berlin airlifts, and Brig. General Henry C. Kristofferson, recalled to duty from Pan American World Airways as commander of the new Provisional West Coast Transport Task Force, could have been picked to head up MATS operations. Both of them know their air transportation.

There is encouragement, too, in the role being played by C. R. Smith, president of American Airlines, who is a part-time consultant on air transportation to Stuart Symington, chairman of the National Security Resources Board. Thanks to Mr. Smith's quick action, the NSRB is now a buffer between the military services and the airlines in order to provide a rational and sensible planning of the nation's fleet capacity in the event of further world trouble.

MATS has been criticized in some circles for not being on the job but the criticism has been largely unfair and its lack of full strength is not of its own making. Last year it was ordered stripped down to a training function and in this the airlines, as well as the Pentagon, must share the blame. MATS was not always too careful to avoid operating in direct competition with commercial carriers, but its mis-handling by the Pentagon is not a pleasant story at a time when a strong global military air transport organization should be deemed essential.

The scheduled and non-scheduled carriers are doing an excellent job operating charters in the Pacific. Northwest, Pan American, United and the Flying Tigers, plus such non-skeds as Seaboard & Western and Transocean, are on the job. Meantime the Korean crisis has had a healthy effect—it has awakened everyone to the need for air transport.

(Turn to Page 8)



Re-Elected to Head AFA

Robert S. Johnson, military sales engineer for Republic Aviation Corp., was elected to a second term as president of the Air Force Association at the annual AFA convention in Boston, August 25-27. A Lieutenant Colonel in the Air Force Reserve, he was the first USAF fighter pilot in World War II to top Capt. Eddie Rickenbacker's record of 26 kills; he completed his tour with the Eighth Air Force's 56th Fighter Group with a total of 28 victories.

American Aviation

Goes
WEEKLY



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AMERICAN AVIATION ONLY



Capital CHOOSES *Pesco* ACCESSORIES FOR ITS NEW LUXURY CONSTELLATIONS

Capital Airlines, with the addition of Lockheed Constellations to their fleet, again step ahead with long strides in luxurious and high-speed travel. America's second-oldest airline serves over 70 centers of industry, commerce and recreation daily. Now, with these new sky giants, even more cities will be added to their schedule.

To keep these queens of the airways aloft takes stamina and endurance. We are proud to have Capital Airlines choose so many Pesco

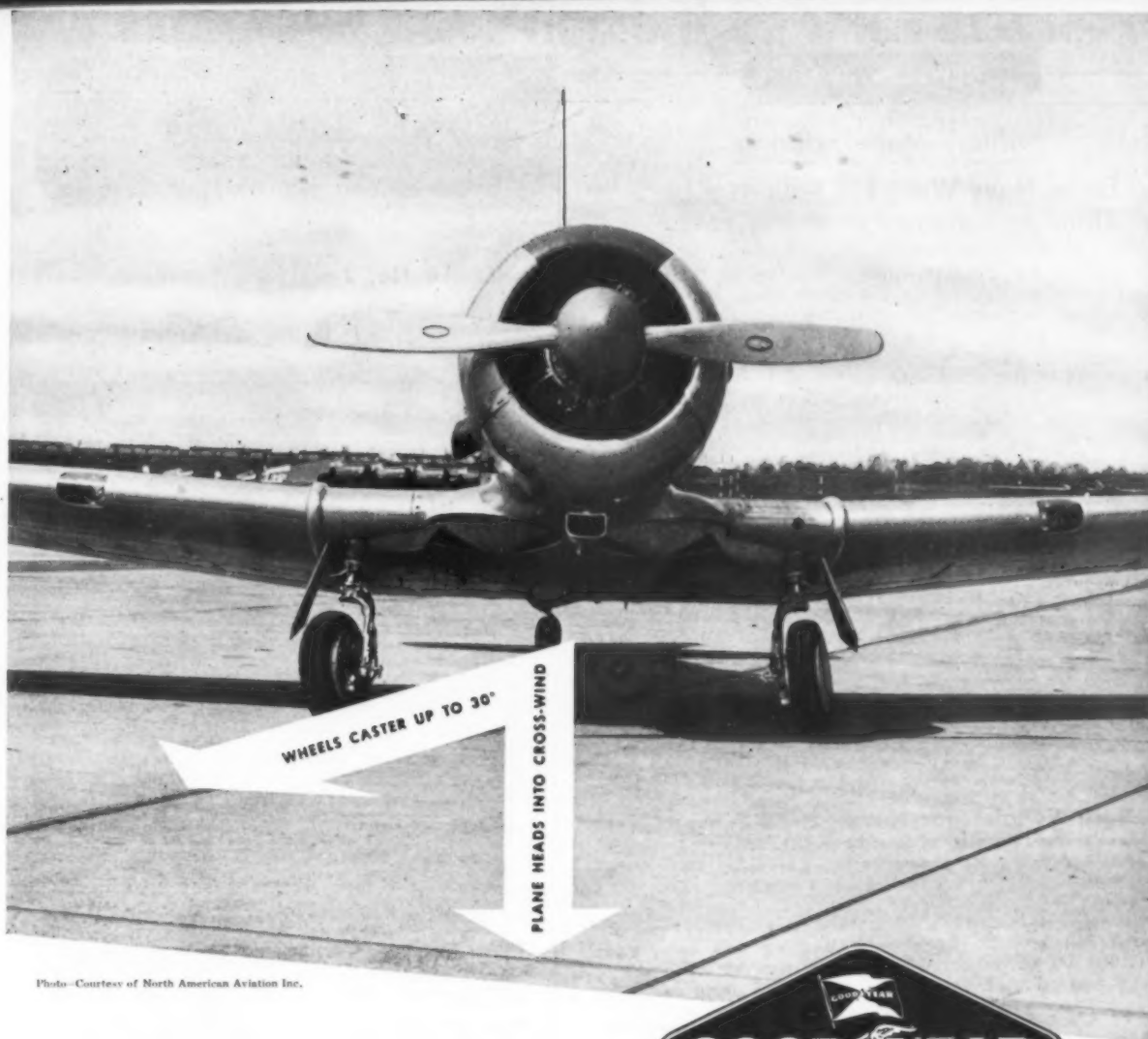
accessories. Ever since the formation of Capital Airlines, Pesco equipment has been used to safeguard flight.

Among the accessories that are being used on these sky liners are: Engine-driven fuel pumps, propeller feathering pumps, engine-driven vacuum pumps and motor-driven hydraulic pumps.

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Photo—Courtesy of North American Aviation Inc.



Prescription for T-6 **CROSS-WIND** landing

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at right angles to the runway. Already in successful use on many civilian aircraft, Goodyear Cross-Wind Landing Wheels point the way to one-strip airfields. New developments like this are one of the many reasons why more planes land on Goodyear equipment than on any other kind. For full information about Goodyear Aviation Products, write:

Goodyear, Aviation Products Division, Akron 16, Ohio or Los Angeles 54, California

Military-Manufacturing**Air Force, Navy Want \$17 Billions
For Plane Procurement in Next 4 Years**

The Air Force and Navy will spend a total of nearly \$17 billions for aircraft procurement in the next four fiscal years, under present expansion plans revealed to the military subcommittee of the House Appropriations Committee.

Breakdown below shows the AF's \$9,922,000,000 requirement to cover attrition in the Korean war and to provide new planes for build-up to a 69-group Air Force by end of calendar year 1953:

Fiscal Year	Over-all Cost	Aircraft Procurement
1951	\$9,308,700,000	\$4,222,000,000
1952	6,900,000,000	2,500,000,000
1953	5,600,000,000	1,200,000,000
1954	6,400,000,000	2,000,000,000

Navy's \$7,000,000,000 plane procurement program for next four years follows:

1951	\$8,300,000,000	\$2,200,000,000
1952	8,000,000,000	1,800,000,000
1953	8,000,000,000	1,500,000,000
1954	8,000,000,000	1,500,000,000

Both AF and Navy estimates are based upon cost estimates for current fiscal year and probably will be revised upward with rising costs.

For details on procurement program, see Pages 22 and 23.

More Connies for Navy: The Navy has ordered an undisclosed number of Lockheed Constellations, which will be given the Navy designation R70. The planes are of the L-1049 type, with the 18-foot fuselage elongation. The Navy had previously bought two earlier model Constellations, the PO-1W's, which are modified versions of the L-749 model. Lockheed's backlog has increased \$208,000,000, or almost double, since the Air Force and Navy started their post-Korea expansion programs.

AF Luxury Ships: In face of the critical need for airlift to Korea, the Air Force has taken three new Boeing C-97 Stratofreighters off the line at Seattle and sent them to Texas Engineering and Manufacturing Co. to be "plushed up." The planes are to be used as "command ships" for Strategic Air Command with office interiors. The combined payload of the three planes equals that of about seven and a half of DC-4's chartered from the airlines.

DC-6's Returned from Airlift: The last of United Air Lines' DC-6's is back in commercial service after duty on emergency airlift to Japan. What surprised military officials in Japan was ability of DC-6 to make San Francisco-Tokyo hop in 24 hours and to complete round-trip in from 50 to 51 hours. Not a single DC-6 trip had even a minor incident or needed anything but quickest turn-around service in Tokyo.

Liaison Plane Orders: Piper Aircraft Corp. which built 105 L-18B liaison planes for Turkish Air Force last year, has received U. S. Air Force order for a production quantity of L-18C's for shipment overseas under the Mutual Defense Assistance Program. Number of planes or dollar value was not disclosed. . . Cessna Aircraft Corp. has received AF order to step up production of L-19' liaison plane three months ahead of original schedule. First L-19's will roll off line soon.

Reluctant Suppliers: Many suppliers to aircraft industry are not too anxious to go after new military

(Continued on Page 6)

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J. H. CARMICHAEL
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NEWS IN BRIEF

(Continued from Page 4)

business. Reason: they're loaded up to the hilt with civilian demands at high peak. Most of these companies were only too glad to get government business in 1941 when they were running below capacity.

C-W To Close Plane Div.: Curtiss-Wright Corp.'s Airplane Division will discontinue operations in March, 1951, according to G. A. Snodgrass, Assistant to the General Manager. Snodgrass said the plant would close because the division has been unable to obtain sufficient military business to continue on a profitable basis. About 1,850 employees will be thrown out of work by the decision to cease operations. The division currently has no production line of its own, work in progress consisting of overhaul and reconditioning of Boeing B-29's, production of spares for Curtiss C-46's and Boeing and Republic subcontract work.

Airlines

More Martins for TWA: Trans World Airlines has increased its order for Martin 4-0-4 twin-engined transports from 40 to 50. Cost of additional planes was not disclosed. Martin has delivered eight of twelve 2-0-2's being leased by TWA and the airline was to begin 2-0-2 service to eight cities September 1.

More Connies for EAL, TWA: Lockheed Aircraft Corp. has received orders for four more Constellations for Eastern Air Lines and six more for TWA. EAL ordered four 92-passenger L-1049 Super Constellations at reported cost of about \$7,000,000. Company, which ordered 10 L-1049's for \$18,000,000, including spares, last April, hopes to have first one in service next fall . . . TWA's six additional L-794A's will cost \$6,000,000, with delivery in 1951.

C & S Selling 3 DC-4's: Chicago and Southern Air Lines has made sales arrangement with The Babb Company, Inc., international brokerage, for disposal of three Douglas DC-4's powered with Wright 9HD engines. Planes will be released later this year after C & S receives Lockheed L-649 Constellations on order. Company has received one of its five Constellations, with another due in September, and third in November. If Constellations are received as planned, C & S will release two DC-4's on October 15, the third on December 15. Selling price will be determined at time of release, but is expected to be about \$200,000 each.

Merger Plan Moves Ahead: Pan American and American Overseas officials are working toward completion of the merger of the two companies in September. All bookings on AOA after date of completion of the merger will be honored by PAA, which expects to start flying AOA's routes on or before September 29. The U. S. Court of Appeals in mid-August had denied motions of TWA and the Brian O. Sparks group for a stay of CAB's approval of the merger and dismissed petitions of same parties for court review of case.

Parks-Ozark Deal? Ozark Air Lines, new feeder-line created through split-up of Parks Air Lines by CAB, reportedly has had several discussions with Parks regarding a purchase deal. Purchase of Parks by Ozark would end existing legal complications. Also Parks has equipment which Ozark wants to buy.

Parks Gets Court Stay: A partial stay of CAB's decision in the Parks Investigation Case, granted by U. S. Court of Appeals for District of Columbia, permits Parks to continue its St. Louis-Chicago service until decision is reached on feeder's petition for court review of entire case. Mid-Continent Airlines, meanwhile, was planning to begin operations over Parks' former Chicago-Sioux City and Milwaukee-Rockford routes on September

26, and Ozark Air Lines was planning to initiate service in near future over part of Great Lakes and Mississippi Valley routes.

DC-3 Market Loosening: The used Douglas DC-3 market which shrunk up tight when the military took airline transports is beginning to loosen again as further requisitioning is off and prospects of new plane production continuation gets better. Ozark Air Lines is purchasing DC-3's for its new feeder route and has gotten one so far.

UAL High-Density Seats: United Air Lines has placed a \$200,000 order for high-density airline seats with Hardman Mfg. Co., South Gate, Calif., including seats for seven DC-3's which United is converting to 28-passenger planes for local service, and high-density seats for DC-6's, although it is said there are no immediate plans for utilizing the DC-6 seats except in event of war emergency or establishment of priorities. The Hardman company, which has been making steady inroads in the airline seat business, will also build seats for the latest 10 Constellations ordered by Eastern Air Lines.

Miami Stop for Aerovias Guest: A three-year foreign air carrier permit was issued by CAB to Aerovias Guest, S. A., authorizing service between Mexico City and Madrid via Miami, the Azores and Lisbon. Local operations are permitted between Miami and Mexico City, but Miami may not be used for originating or terminating trans-Atlantic flights. The award is believed to have cleared the way for resumption of discussions between Mexico and the U. S. leading toward a bilateral air transport agreement.

Local Operations

New Aviation Organization: A group of large fixed base operators have formed a new organization—Aeronautical Services Association—for purpose of advancing the services of non-airline civil aviation in the war emergency period. Kendall K. Hoyt, aviation writer and prewar manager of the National Aeronautic Association, is Washington representative with offices at 1216 DuPont Circle Building.

Charter members of ASA, also members of the National Aviation Trades Association, include: **Arthur Currey**, Currey Flying Service, Galesburg, Ill.; **Esmond Avery**, Aeroservice, Inc., Omaha, Neb.; **Joseph W. Hance**, Hance Flying Service, Wyandotte, Mich.; **J. Grant Robertson**, Clinton Aviation Co., Denver, Colo.; **Mel D. Walston**, Walston Aviation, East Alton, Ill.; **John H. Wilson**, Mid-States Aviation Corp., Deerfield, Ill.

Charles A. Parker, NATA director, saw no conflict between the two organizations, and indicated that ASA may become an effective force in the airman training field opening up as result of war.

Fixed Base Surveys: CAA's survey of facilities of fixed base operators is about ready for publishing. Meanwhile, Air Force is making own survey of such facilities for possible use in emergency.

* * *

CAB-CAA Standstill: There's a drought of good candidates for vacancy on Civil Aeronautics Board. No prominent names are even in rumor stage . . . Proposed move of CAA Administrator Del Rentzel into Commerce Dept. is also at standstill.

Air Star Route Wanted: The Postmaster General has applied to CAB for certification of Air Star Route between Mackinaw City, Mich., and Mackinac Island, Mich. Interested parties may submit comments to CAB no later than September 25. Bids will be solicited by Post Office Dept. following CAB approval of route.

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Under the sponsorship of the U. S. Navy Allison has developed a world's "first" in the new T40 Twin Turbo-Prop—an engine which, for its horsepower, is the lightest-weight and smallest-size propeller-type power plant ever cleared for flight.

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These savings mean better aircraft performance in terms of higher speed, greater payload and increased range.



Allison

DIVISION OF
INDIANAPOLIS, INDIANA



BUILDER OF THE FAMOUS J33 AND J35 TURBO-JET AIRCRAFT ENGINES

SEPTEMBER 4, 1950

After the Battle

NOW THAT the opponents have exhausted their legal efforts to halt the acquisition of American Overseas Airlines by Pan American World Airways, it is time to push into the background the many unfortunate incidents, the conflicts and the frequently bitter recriminations involved in this highly controversial case.

In other words, all parties should accept the verdict and go back to work. The unnecessarily long time to bring the case to final decision was one of the most unfortunate developments in air transport history.

Although TWA opposed the acquisition, it is not in an unsound competitive position itself. Now that the question of whether three U. S. carriers on the North Atlantic are required in the public interest is purely academic, let's see how well two carriers can function in the jobs assigned to them by government.

Ever since the start of the North Korean invasion, international air transport has taken on a new complexion. Many of the basic issues of competition and balance involved in the PAA-AOA case have already disappeared in the light of world conditions. We are now in a new kind of armed world in which sales initiative for greater tourist travel may well be supplanted by the need for more efficient equipment utilization.

In 1952 the North Atlantic certificates expire and the government will have to take another look at our foreign air policy. It is probable that the criteria of this re-examination will be markedly different than they were in 1945 when our international air transport program was anchored to a peaceful world.

Something About Us

WITH THIS issue dated September 4, AMERICAN AVIATION initiates the first major change in its publishing schedule since it was founded June 1, 1937. The formal announcement is on Page 9.

We are going weekly—but with a plan that is unique in the publishing field. The distinction between our magazine and the conventional type of weekly is that every other issue of ours will be a news edition briefed down for busy men in a busy industry.

While we dislike using the editorial page to talk about ourselves, perhaps we may be pardoned on the occasion of this major change to write about our organization and our plans, since they directly affect our service to you.

Ever since it was launched January 3, 1939, our *American Aviation Daily* has been the primary news source for the aviation industry. It is unique in the publishing field and its reputation and standing have always been exceptionally high. It has always been first with the news. Industry relies upon it heavily for the accurate news of the day and for the news behind the news.

Now the full resources of this prime news-gather-

ing staff are being made available to the readers of AMERICAN AVIATION. For our new weekly news plan the latest possible deadline and presstime will be maintained—the fastest production schedule ever known to the aviation publishing field. (But fast production is no novelty to our organization—the *Daily* is a complete job from reporting to mailing between 9 a. m. and 5.30 p. m. each day).

There are all kinds of magazines published for all kinds of industries, but we are a little proud of our kind. Some magazines are edited by one or two men. Some go to the other extreme of listing secretaries as "editorial assistants" so they can boast of "the largest editorial staff." Some magazines are given away free under what is known as "free controlled circulation." Others go to any extent and cost to keep their circulation at an artificially inflated level for certain advertising claims. Most publications are dominated by the "business office" where the editor and his staff are employees reporting to the publishing company.

We in AMERICAN AVIATION, as we said, are a little proud of our kind of publication. The editor and the editorial staff are predominant—there is no over-riding or all-powerful business department to dictate or establish policy. We devote our efforts solely to aviation—aviation is no sideline with us. Not only that, but each member of the staff has an abiding interest in aviation industry problems—we are part of, and live in, the aviation community.

We think this is important. We think our readers believe so, too. Most of our staff have come to us directly from the aviation industry itself—they know and understand industry problems. We know that we have the finest and largest full-time staff of trained, experienced specialists in the aviation publishing field. Each man knows his job from 'way back.

We know, too, that we have very loyal readers, and we hope now to serve them better. Recently we conducted a readership survey which had exceptional results. A direct-mail expert told us that our questionnaire was much too long and that our returns would be meager. The returns were many times higher than the most optimistic estimate. You who took the time and trouble to express your opinions and preferences have the heartfelt thanks of our staff. Your preferences have told us that we are on the right airway with our new plan.

And so we are launching something new. The news tempo of aviation has quickened. We are all living in a new kind of armed world. After publishing our magazine twice a month since June 1, 1937, we will now come out 52 times a year to keep you informed up to the minute on what's going on and what's likely to happen. We think you'll like our brief news edition appearing every other week starting September 11. We think you'll like the new news section, patterned after the format of the news edition, in the alternate magazine issues, beginning September 18. We'd like to have your comments, criticisms and suggestions.

WAYNE W. PARRISH

AMERICAN AVIATION

Announcing to all
American Aviation
Subscribers...

the most streamlined news idea of a decade...

STARTING WITH THIS ISSUE YOU'LL GET
American Aviation every week!
...52 ISSUES A YEAR

HERE'S THE IDEA...

① Every other Monday you'll get a *news edition* (without advertising) containing trends, and the latest news boiled down for easy reading.

② On alternate Mondays you'll get all of the regular features you're used to reading, with advertising from the leading firms of aviation, *plus* a brand-new news section following the same pattern as the news edition.

③ The full news-gathering facilities of the most experienced aviation writing staff in America—the staff that edits *American Aviation Daily*.

④ The very latest news—*first*. By streamlining its production facilities, the presstime for news in American Aviation will be moved up by several days—the *latest deadline* by far of any magazine in the field.

So—what you'll get in AMERICAN AVIATION is the *earliest news* combined with a magazine with the top features, the best technical writing, and the best all-round departments ever gathered together between two covers.

The pioneer news organization in aviation—the one the *industry relies upon*—is going to war! Events are moving fast these days. You can depend upon American Aviation to be first—and accurate!

* Watch for your first issue of the news edition—the magazine with a newsletter flavor . . . September 11.



American
Aviation

B.F. Goodrich



World's biggest bomber switches to B. F. Goodrich brakes

ON AUGUST 3, the world's largest bomber took off and landed for the first time on B. F. Goodrich wheels and brakes. This was the first of the B-36s now on order at the Fort Worth Division of Convair which will be B. F. Goodrich equipped.

The switch by the B-36 is another step in the trend of large aircraft to B. F. Goodrich Expander Tube brakes. There are good reasons for the trend. The basic design of BFG brakes saves weight, gives maximum braking power, reduces maintenance, prolongs life.

And several new features have been added. The new BFG brake block design—with lining *cemented* on magnesium shoes—is stronger, lighter, and increases the amount of usable lining. The new narrow-cavity expander tube provides greater braking pressure, yet requires less fluid. The new spider-type frame is both lighter and stronger.

BFG brakes can be designed lighter, for a given amount of kinetic energy, than any other brake. Their full-circle braking action slows down and spreads wear. The brake cannot lock or grab.

Maintenance is quick and easy because many extra parts found in other brakes are eliminated. Relining calls for only a screwdriver and wrench.

Today's B. F. Goodrich brake is the result of constant research by BFG engineers. Why not put them to work on your problems? Write *The B. F. Goodrich Co., Aeronautical Division, Akron, Ohio.*

B.F. Goodrich
FIRST IN RUBBER

AMERICAN AVIATION

Industry wary of CAA military aims

By WILLIAM D. PERREAULT

AMID LOUD protests from virtually every civil aviation organization, the Civil Aeronautics Administration is moving ahead full speed to provide a working blueprint for wartime operation of its many functions and those of the industries which it regulates. As presently programmed, the arrangements would be provided by three distinct plans:

(1) **The Air Security Bill:** Senate Bill 3995 would provide the means to identify, locate and control all aircraft operating in defense areas. It would probably include mandatory filing of flight plans, operation between points in accordance with specified routes, report of position at fixed times, operation at designated altitudes, etc.

(2) **The Civil Aeronautics Corps Bill:** This proposal has been submitted to the Bureau of Budget and should soon be introduced into Congress for enactment. It would provide for the immediate establishment of a special corps within CAA's normal employe ranks which in the event of a war (or possibly in a national emergency) would become the Civil Aeronautics Service. The CAA Administrator would be commissioned as chief of the service and the affected employes would be placed in uniform as commissioned officers, warrant officers or enlistees.

(3) **The Airport Bill:** The Air Security Bill originally made provisions for the military control of certain airports as required by military operations. Following the first CAA-industry meeting on the bill, these provisions were eliminated. CAA

now plans on introducing the matter at the October meeting of the CAA Airports Advisory Committee where affected groups can introduce their best thinking on this issue.

Uneasiness Afield

The industry's objections to the CAA three-pronged proposal reflected the "mild form of panic" which now exists in the lightplane and fixed base operator fields. Both the Aircraft Owners and Pilots Association and the National Association of State Aviation Officials report the same condition. There is a mass tendency among private operators to sell their airplanes and terminate lease agreements before civil flying is sharply curtailed or completely halted.

In the midst of this, the industry looked to CAA for a sound plan which would lend assurance to the operators that these rumors were false, as they apparently were. Instead, on August 14, CAA called in

industry representatives for their first look at the militarization program. Among the groups attending the meeting were AOPA, Air Transport Association, Aircraft Industries Association, Aeronautical Training Society, NASAO, USAF and the Navy.

To the unprepared organization representatives the whole program was a shock. CAA wasn't shocked by the proposals or the reaction. In cooperation with the military services, CAA officials had been working on such a program since Del Rentzel took office as Administrator in May, 1948. At this late date the proposed legislation, security classified by the military until just before the meeting on August 14, seemed perfectly natural, both to CAA and the Department of Defense.

Pre-Korea Planning

One major point was being missed, Rentzel urged: This was not a result of the Korean "police action." In justifying the program to both civil organizations and Congress, CAA pointed to the recommendations of the President's Air Policy Board made nearly two years earlier:

"Electronic aids to air navigation and landing, airways traffic control systems, weather reporting and forecasting systems, airports and ground facilities, and communications networks are essential to military aviation in time of emergency along with the trained personnel involved. As much of these systems and trained personnel as can be engaged in commerce and the public interest in time of peace—so much is available in a national emergency. Moreover, if the



"But we can't afford another traffic controller, General, we've already got over 12,000 colonels, 23,401 captains, etc., etc."

civilian personnel has military reserve status, integration might be accelerated in an emergency. Continued study of this last aspect of the problem should be made by the Government agencies charged with mobilization planning."

Following heated verbal exchanges in the CAA-industry meeting, in which ATA's Admiral Emory S. Land reminded military representatives that his years in service made him more aware of military practice than they, extensive changes were made in the Air Security Bill.

No Quick Curtailment

When later reported out by the Senate Interstate and Foreign Commerce Committee, the revised bill was accompanied by a committee comment that "This does not mean, however, that on the enactment of this legislation there will be an immediate curtailment of flying activities, restrictions on flight operations or other interference with civil aviation. It is possible that years could go by without there being established any restricted defense zone under the bill."

As submitted to Congress the Air Security Bill appeared to be an efficient means of attaining suitable control of aircraft operating on the Federal airways to provide identification and control of all aircraft operating within sensitive defense areas. But the compounding of the Civil Aeronautics Corps Bill on top of the ASB would militarize CAA personnel and thus introduce rank into the business of traffic control. Without exception the industry groups objected to this proposal.

Introduced as wartime legislation during peacetime, the CAA proposals might have been accepted with little resistance. Despite Rentzel's assurance that the powers were for use only in an all-out emergency and not for the present-day partial mobilization, the wording of the Corps Bill would give the President powers which could be used immediately if he so desired.

Transfer to Air Force

The CACB provides that in times of national emergency or at such other time as he might deem advisable, the President may transfer the CAA, or portions thereof, to the Department of Defense where it would be assigned within the U. S. Air Force. In addition to the transfer of the functions, property, personnel and unexpended appropriations to the Department of Defense, the CACB would permit the president to transfer some CAA functions to other government agencies.

Specific protection against the disintegration of the major CAA functions is provided by a proviso stating "the functions so transferred to the Department of Defense and assigned

to the Civil Aeronautics Corps shall not be reassigned to any other military organization."

Upon enactment of the CACB, CAA would designate certain functions and personnel as parts of the corps. These would be made up primarily of technical personnel from the Federal airways, communications and airports divisions. They would not be given military status at this time but would have "statutory protection" to prevent their induction.

Should the President issue an

executive order transferring CAA to the Department of Defense, the CAA administrator would be made chief of the service and be given the rank of general which would place him "within the military echelon where he may establish command functions." As chief of the service Rentzel would appoint warrant officers and enlisted men as required. The President, with the prior consent of the Secretary of the Air Force and the Senate, would appoint all commissioned officers.

Air Force Would Control These Facilities Under CAA Militarization

As of June 30, 1950, the Office of Federal Airways, CAA, was maintaining and operating the following facilities:

Civil Airways

Controlled Civil Airways, Mileage	65,437
Non-controlled Civil Airways, Mileage	4,589
Oceanic Routes, Mileage	24,030

Landing Areas

Intermediate Fields	131
Jointly Operated Fields	68

Lighting Aids

Airways Beacons (excluding those at landing areas)	1,682
Neon Approach Light Lanes	91
High Intensity Approach Light Lanes	13*

Air Navigation Radio Aids

Low/Medium Frequency Ranges	377
Very High Frequency Ranges	367*
Low-Frequency, Omnidirectional Ranges	1
Non-Directional Homing Beacons	128
Compass Locators	170
Fan Markers	281
Instrument Landing Systems	96**
Precision Approach Radar	4
Airport Surveillance Radar	4

Communications Stations

Interstate Airways	462
Overseas-Foreign Airways	14

Traffic Control Facilities

Airport Traffic Control Towers	167
Air Route Traffic Control Centers	30
Mechanical Interlocks	2

Teletype & Interphone Services

Weather Reporting Circuits	
Circuit Mileage, Teletype Services A, C & O	77,219
Circuit Drops, Teletype Services A, C & O	930
Traffic Control Circuits	
Circuit Mileage, Teletype Service B	33,236
Circuit Drops, Teletype Service B	528
Circuit Mileage, Interphone Service F	61,164
Circuit Drops, Interphone Service F	3,252

* Includes 30 operating on test and 337 fully commissioned ranges

** Includes two SCS-51 and one localizer only installation

The provisions of the Civil Aeronautics Corps Bill are very general and broad in scope. Very wary of such broad powers, the industry groups wanted details as to the manner in which these functions would be handled. CAA was in no position to provide this information since the proposals are not based on an existing emergency. Detail functions would be spelled out in an executive order issued by the President at the time he decided to use the authority. These details would be based on the nature of the emergency then facing the country.

The proposed legislation did give the civil industry its first concrete status as an operating function in wartime. While it was a meager and controversial program, it would provide a working plan which could be put in operation almost instantly and be modified as experience dictates. By various means the military services had taken over facilities, functions and personnel of CAA during the last war. This new plan would preserve the present organization, CAA felt.

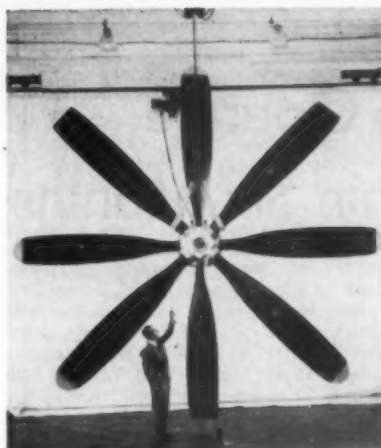
The alternative, CAA officials declared, was a gradual and complete breakdown of the CAA-administered facilities such as occurred then. Some 70% of CAA's technical personnel are in the military reserves. Most of them joined CAA directly from the services. Their particular skills are the ones on which top priority is now being placed in the recall of reserves. Even at this early date in a small-scale mobilization program, CAA has lost over 50 key personnel—traffic controllers and communications men.

High Military Usage

Furthermore, there were considerations of relative usage. During the war 70% of the traffic on the Federal airways and into the nation's airports was military traffic. By volume alone the military services had a major stake in the handling to be used during such times. CAA and military communications and navigation facilities were duplicated in many instances during World War II and in some instances triplicated. Government officials feel that this type operation can not be permitted to recur.

Recognizing these factors the Department of Defense recommends the CAA legislation and pending its adoption has been granting liberal postponement of recall of CAA-employed reserves. As a further step Rentzel is considering an interim policy which would provide blanket exemption of key CAA personnel while the legislation is under consideration.

CAA employes in the reserves are not uniformly sympathetic toward the program. In one control tower, for instance, there is one reserve colonel and three lieutenant colonels. Need-



C-W Octoprop—

This is the "Octoprop," the world's largest and most powerful aircraft propeller, developed by Curtiss-Wright Corp's Propeller Division. It is a dual-rotation, eight-bladed type capable of absorbing 10,000 to 15,000 horsepower. Diameter is 19 feet, the same as the Curtiss Electric propeller used on the Convair B-36, but the B-36 fan has only three blades. The propeller has been delivered to the Air Force's Air Materiel Command, where it will be put through an extensive test program.

less to say, CAA can not promise them any comparable rank in the CAC. Rentzel has promised employees that "serious and careful attention is being given this problem," the economic aspects of militarization.

Actually it would appear that such factors could only be taken care of by insuring that employees of CAA be assured a military rank which provided income equal to their present civil service ratings. No such action is proposed in the tentative legislation nor in the covering letter which accompanies it.

Industry Sympathetic, But—

Industry groups recognize CAA's manpower problem and are sympathetic toward it, but believe that there are other ways in which it can be solved. They find it difficult to believe that measures taken to insure continued aircraft production, for instance, could not serve CAA equally well.

As this issue goes to press, CAA is meeting with industry groups to try and iron out some of the more controversial issues. To most civil aviation representatives there was only one bright spot in the legislation: It specifically provides that "upon termination of the national emergency the President by Executive Order is to demilitarize the special Civil Aeronautical Corps and re-transfer those portions affected back to the Department of Commerce."

Aviation Calendar

Sept. 4-7—National Flying Farmers Association annual convention, Bemidji, Minn.

Sept. 5-7—6th annual spark plug and ignition conference, sponsored by Champion Spark Plug Co., Secor Hotel, Toledo, Ohio.

Sept. 9-10—Aircraft Owners and Pilots Association 4th annual summer round-up, Wildwood airport, Wildwood-By-The-Sea, New Jersey.

Sept. 12-14—Conference on ground facilities for air transportation, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Sept. 15-17—Instrument Society of America instrument maintenance clinic, New York State Institute of Applied Arts and Sciences, Buffalo, N. Y.

Sept. 18-22—Fifth national instrument conference and exhibit, Memorial Auditorium, Buffalo, New York.

Sept. 19-21—Institute of Navigation—Radio Technical Commission for Aeronautics—Radio Technical Commission for Marine Services joint meeting on navigation and electronics, Hotel Astor, New York, N. Y.

Sept. 25-27—National electronic conference, Edgewater Beach Hotel, Chicago, Ill.

Sept. 28-30—Society of Automotive Engineers aeronautic meeting and aircraft engineering display, Biltmore Hotel, Los Angeles, California.

Sept. 28-30—Air Reserve Ass'n annual convention, Hotel Texas, Ft. Worth, Texas.

Sept. 28-30—International Northwest Aviation Council 14th annual convention, Sun Valley, Idaho.

Oct. 2-4—National Association of State Aviation Officials annual convention, Minneapolis, Minnesota.

Oct. 12-13—1950 conference on airport management and operations, Max Westheimer Field, North Campus, University of Oklahoma, Norman, Oklahoma.

Oct. 16-20—CAA Airports Advisory Committee meeting, Ft. Worth, Texas.

Oct. 17-18—3rd annual New York State airport management conference, Syracuse, N. Y.

Oct. 19-20—Tennessee aviation conference, Knoxville, Tennessee.

Oct. 25-26—Flight Safety Foundation annual safety seminar, Denver, Colorado.

Oct. 26-27—Fifth annual aviation conference, Tucson, Arizona.

Nov. 29-Dec. 1—Aviation Distributors and Manufacturers Ass'n 8th annual meeting, Ambassador Hotel, Los Angeles, California.

Nov. 30—Airport fire safety clinic, sponsored by the Committee on Aviation and Airport Fire Protection, National Fire Protection Ass'n, Baker Hotel, Dallas, Texas.

International

Sept. 5-10—Society of British Aircraft Constructors annual flying display and exhibition, Farnborough, England.

Sept. 14—ICAO Airworthiness/Operations meeting, Paris.

Sept. 19—ICAO Air Navigation Commission meeting, Montreal.

Sept. 27—ICAO Council meeting (11th Session), Montreal.

Sept. 28—ICAO Air Transport Committee meeting, Montreal.

Oct. 12—IATA Executive Committee meeting, San Francisco, California.

Oct. 16-20—IATA Annual general meeting, Fairmont Hotel, San Francisco, Calif.

MATS Expects to Operate Entire Airlift Within Six Months

BARRING a major change in the military picture, the Military Air Transport Service expects to be able to take over the entire operation of the Pacific airlift within six months' time.

First indication of the tapering off in airlift demands came when MATS notified the airlines that ships promised but not already in use on the Pacific shuttle need not be delivered. Actually this affected five of the 45 airplanes promised by the scheduled airlines and 11 of the 26 planes promised by the non-scheduled operators.

Unconfirmed reports indicated that the tapering off resulted when actual deliveries into Japan reached 72 tons per day, 12 tons higher than the goal originally set by General MacArthur.

Appearing before the military subcommittee of the House Appropriations Committee, Lt. Gen. Edward W. Rawlings justified the request for supplemental appropriations for MATS in part by explaining that MATS expects to handle the entire airlift requirements without the aid of commercial airlines within the next six months.

Offers C-46's

This firmed up but did not confirm rumors in Washington that some airlines would have their airplanes returned within 60 days. Meanwhile, the Air Force offered for sale to airlines "whose present equipment is being utilized in handling the increased requirement of the government for airlift" 18 Curtiss C-46 Commandos. Planes will be sold on bid basis with a proviso that they may not be resold, leased or otherwise disposed of for one year or as long as the airlift requirements exist.

Since the start of the Korean "police action" and chartering of commercial airline airplanes to meet the airlift requirements considerable speculation has existed as to the part being played by MATS equipment. Actually investigation has shown that of 248 airplanes involved in the airlift 63 are airline planes, 72 are those of the troop carrier command, and the remainder MATS ships.

MATS records show that they have 240 Douglas C-54's of which 208 are considered operational aircraft. This is supplemented by 27 Navy R5D's. During May, the last month for which figures are available and before the start of the Korean conflict, MATS' C-54's showed an average daily utilization of 2.4 hours. This utilization was based on 167 aircraft and, con-

sequently, for comparison purposes fleet utilization was much lower.

During the same month a random check of C-54 utilization by commercial airlines showed they experienced 11:09 hours, 8:06 hours, 5:05 hours, 10:04 hours and 4:37 hours for those planes in passenger operations and 4:33, 5:46 and 4:32 for those in cargo operations. It might be noted that a number of MATS aircraft are tied up with rescue services and similar non-productive tasks of general aeronautical service.

Sought Airline Aid

Low utilization of MATS airplanes was directly responsible for the military services having to turn to the commercial airlines for the required airlift. In consequence contracts with airlines were made. These were negotiated on an individual basis and payments based on the direct operating costs per plane mile of the particular line.

Per-plane-mile rates for four of the major lines participating in the lift with DC-4 aircraft include \$1.82 for Pan American, \$1.93 for United Air Lines, \$2.15 for Northwest and \$2.50 for Trans World Airlines. Since payments are said to be based in part on the direct operating costs of the airlines it is interesting to look at these costs.

During 1949 the direct operating

costs of these same lines for the C-54 equipment averaged 96.8c for PAA (Pacific Alaska Division), 88.4c for United, 59.9c for Northwest and \$1.15 for TWA-International. PAA and NWA were also reported operating at least one Boeing Stratocruiser each in the airlift. DOC for these planes during 1949 were \$1.73 for PAA and \$1.61 for NWA. The higher costs were in part a reflection of the high cost of introducing new equipment to scheduled service.

Industry circles in Washington feel that MATS will use the information on the cost of these operations by the chartered airline ships as a basis of trying to rebuild their now skeletonized operation. Shortly after the last war MATS was forced to abandon its transcontinental route and later on to abandon its routes into South America, primarily because of competitive aspects with airlines.

With the reductions in these services there was a corresponding cut in funds, according to MATS representatives. The reduction in funds with which to operate aircraft and train crews combined with the large number of transport aircraft assigned to MATS to make even moderate utilization figures impossible.

C-54's 'Obsolete'

Although it remained the major piece of equipment available to MATS for routine or emergency operation, since the war the Douglas C-54 has been looked upon as an "obsolete aircraft." Consequently funds would not be made available to keep the ships modernized in the manner in which commercial airline planes are maintained. Neither were funds made available for tools or ground equipment which might have facilitated ground handling and maintenance.

Men Behind the Korean Airlift

Brig. Gen. Henry C. Kristofferson, Pan American Airways pilot, has been recalled to service by the USAF and placed in command of the newly established Provisional West Coast Airlift Task Force. This group, assigned within the Continental Division of MATS, will exercise prime control over the



Kristofferson

Pacific air lift operation. Kristofferson, who prior to recall by the services was in command of PAA's planes operating in the Pacific air lift, was prominently associated with helping to launch the full-scale "Hump" operation during World War II.

Major officers and groups heading up MATS' present day organization

are as follows: Maj. Gen. Laurence Kuter is commander of MATS. Below this level the organization is divided into two divisions: Operations and Services. Services includes operation of the weather, rescue, communications, and flight services and is under the direction of Gen. Caleb V. Haynes, deputy commander for services.

Operations, the group primarily concerned with the air lift in the Pacific, is under Maj. Gen. William H. Tunner, famous for his leadership during the Berlin Airlift and during the "Hump" operation, who is MATS' deputy commander for operations. His division is divided into the Atlantic Division under Maj. Gen. James Spry; the Pacific Division under Rear Arm. William G. Tomlinson and the Continental Division under Maj. Gen. James Stowell. Kristofferson's newly created task force is within the Stowell organization.



Trip Insurance—Captain C. G. Whitney, AMC test pilot, is shown here with the new parachute which opens automatically at a pre-fixed barometric pressure set to equal a given altitude or on a time basis which can also be adjusted. Standard ripcord provisions are also provided. Parachute is being manufactured by Switlik Parachute Co. and Pioneer Parachute Co. Timer and aneroid elements are manufactured by Schwien Engineering Co.

nance and thus left more time available for flight.

Since the start of the Korean conflict MATS has been making an all-out effort to train ground and flight crews and has taken every possible step to implement their operation and bring it back to strength.

They have full faith in their ability to bring utilization figures to a high level. During the Berlin airlift MATS planes showed a daily utilization of 9.3 hours on DC-54 equipment. Earlier, during the war, ATC as part of the USAF actually exceeded 13 hours daily utilization on one of its major overseas routes operating out of Wilmington, Del.

PEOPLE IN THE NEWS

Knox B. Phagan, New York management and accounting executive, has been appointed deputy comptroller of the Air Force.

Thomas K. Jordan has been appointed director of the Wisconsin Aeronautics Commission, succeeding **Lester J. Maitland**, who resigned to accept a similar position in Michigan. Jordan served under Maitland as chief engineer and deputy director.

Dr. Ross A. McFarland, of the Harvard School of Public Health; **Adm. Edward H. Smith**, director of the Woods Hole Oceanographic Institution; and **Charles A. Rheinstrom**, vice president of the J. Walter Thompson Co., have been elected members of the board of governors of the Flight Safety Foundation.

Farnborough Preview

IN RECENT years the Society of British Aircraft Constructors' annual exhibition and display during the first week in September at Farnborough has been assuming an increasing importance and it is now astutely presented as the largest single collection of military air potential in the Free World and also the most comprehensive commercial showcase of civil aircraft.

Production orders for military aircraft from South America, Europe or the British Commonwealth may not follow because a prototype flies inverted over the visitors who attend each day, but performance at the show by each manufacture is, as it were, the stamp of final approval. There is, incidentally, an opportunity for a surprising display of flamboyance by a nation noted for its phlegmatic approach to industry and its products.

New Designs

The designs not quite ready for the show are as interesting as those which—sometimes lacking the finishing touches—are scrambled along at the last moment. Indeed these last-minute arrivals, sometimes by air, like the Avro 707 last year, and sometimes by truck, like the Firth helicopter this year, reflect the significance which the British attach to the exhibition and explain a world-wide interest in the event.

The most important aircraft certainly not flying this year are Britain's two medium jet bombers, the 600-mph. Handley Page tail-less and the Vickers multi-jet. So, yet another year must elapse before the British gain any substantial flying experience with this class of offensive weapon which is now the weak link in the chain of European military aircraft.

British Policy and Planning

After taking into account the unpredictable surprises which the industry might pull out of the hat at the last moment, the SBAC show this year will probably go down as underlining two separate and distinct policies. One of these is the development, on top priority of civil money-spinners like the Vickers Viscount, the de Havilland Comet and Heron, the Percival Prince and perhaps the Handley Page Hermes 4 and Short Sealand.

The "wasting" of one precious Viscount airframe at this stage by mounting two Tay jet engines shows that the British still some-

times can not resist the temptation to over-develop at the expense of commercial interests. This bug, which still eats away the foundations of French airpower, often has quite a hungry nibble in England.

The Viscount and Dove can probably hold their own anywhere—even in the U. S. domestic market—while the others, except the Comet, will appeal mainly to operators who must buy their transports in the Sterling area.

The second policy is the clear recognition of the need to keep effective military types in production (even if they are, strictly, outmoded by drawing board projects and perhaps by prototypes now flying), because this is the most direct expression of military strength.

Some of these European countries like Britain and Holland are spending comparatively more on defense than we are, and are going far towards the aim of enabling Europe to defend itself and yet still continue the process of recovery. It is getting to be almost a legend that the more the RAF sees of new prototypes the more feverishly they order Meteors and Vampires. The show this year will not alter the impression that industry still finds it exceedingly difficult to build a fighter with a performance sufficiently better than the Meteor and Vampire (or Venom in its latest form) to justify the costs of extensive production.

Spectacular Research

Another, and the most spectacular, aspect is, as always, the lines of new research. This year there will be a Lincoln with two Armstrong Siddeley Sapphire 8,000-lb.-thrust jets and another with two Bristol Proteus 3,200-hp. turbines. There may be a Viking with two 1,500-hp. Napier Naiad turbines and there will be evidence of the new Rolls-Royce Avons, which have dry thrust ratings of up to 10,000 lbs. and rate as Britain's largest jet projects.

There may be a new Boulton Paul jet research aircraft, and what Gloster refer to as "an entirely new jet project." Bristol may reveal something of its 9,000-lb.-thrust jet engine.

The second D. H. Comet, the second Avro 707 delta wing, the prototype Avro Ashton four-jet experimental aircraft and possibly the D. H. Sea Vampire 21 undercarriageless Navy fighter and perhaps a new Fairey rocket missile will make this show of special interest.

—R. G. W.

AVIATION ENGINEERING

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With the Martin Viking rocketing 106 miles above the Earth at 3600 m.p.h. . . . with piloted aircraft passing the sonic barrier... man's physical limitations create new problems, demand new methods of aeronautical designing.

MARTIN VIKING
... U.S. Navy high-altitude research rocket... holder of altitude record for American-built, single-stage rocket!



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To meet this challenge, Martin engineers are designing aircraft as integrated airborne systems, not merely as flying vehicles whose sole goal is speed. Whether planning a U.S. Navy Viking rocket, a jet-powered Air Force XB-51 or a modern airliner . . . Martin engineers work with all three elements of airframe and power plant, electronic flight and navigational controls, and military armament or passenger facilities. And design work is so scheduled that the end product represents a completely coordinated system. For there is no point in having an airframe ready for flight testing while the electronics system, which may alter the airframe, is still a gleam in the designer's eye.

This is Martin *systems engineering*—a new beacon to pierce the blackness of the *unknown*—developed from Martin's background of far-reaching advances on top level missiles projects. This is why radar, servo-mechanism, automatic control, automatic computer and antenna experts—as well as aerodynamicists, structural engineers and electrical, hydraulic, armament and power plant installation specialists—are all part of the well-integrated engineering team Martin offers its customers today! THE GLENN L. MARTIN COMPANY, Baltimore 3, Maryland.



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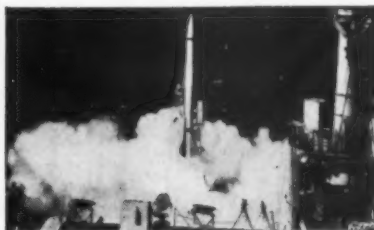


Aircraft Since 1909

Martin AIR MEMO

Facts on the Air Age

by The Glenn L. Martin Company, Baltimore 3, Maryland



New Rocket Record . . . On May 11, a Navy Martin Viking zoomed 106.4 miles into the upper stratosphere from the deck of the U.S.S. *Norton Sound* in the Pacific, setting a new altitude record for an American-built, single-stage rocket. Reaching a top speed of 3600 m.p.h., the Navy rocket carried intricate instruments which recorded data about cosmic rays for future study. The information was flashed back to the ship by an automatic radio transmitter in the missile.

This was the first time that the Martin Viking, largest U. S. upper atmosphere research rocket, had been fired from a ship, a Navy seaplane tender converted into an experimental guided missile ship.



World Safety Mark . . . U. S. flag airlines operating internationally set a new world safety record on April 14, by completing two years without a single passenger fatality. During the two-year period, the American air carriers flew nearly three million passengers approximately four billion passenger miles, also a world record for airlift. The carriers operate 203,678 route miles internationally, serving 239 foreign points on all continents.



Aircraft Design Advances . . . With piloted aircraft following guided missiles past the sonic barrier, man's physical limitations are creating new problems for aircraft designers who must give him the assistance of mechanical and electronic senses, muscles and nerves! To meet this challenge, Martin engineers are designing aircraft as integrated airborne systems, not merely as flying vehicles whose sole goal is speed. In this systems engineering, Martin designers work with all three elements that go to make up a complete, modern airplane or missile—airframe and power plant, electronic flight and navigational controls and military armament or passenger facilities. And the complete development is so scheduled that the end product represents a completely coordinated system.

Wind Speeds exceeding 7500 miles per hour, surpassing anything ever dreamed by prewar air scientists, have been obtained in a new wind tunnel announced by the Naval Ordnance Laboratory at White Oak, Md. Penetrating for the first time in history into mysterious realms known as "hypersonic," the new tunnel is regarded by government scientists as the first step in basic research which may some day lead to scientific machines which will girdle the globe in minutes and open the far reaches of the universe to man.



Jet Trainer . . . A new model of the wartime Link Trainer has been okayed by the U. S. Air Force to combine ground training in flight, engine and radio navigation of high-speed jet planes. Rates of roll, climb and acceleration are faithfully duplicated and controls are loaded so pressures vary with air speed. An integral part of the new trainer is emergency controls with which a check pilot behind the cockpit can introduce a variety of operating troubles. The instructor can make the fuel pump or hydraulic system fail, stir up a thunderstorm, have a fuel tank punctured by flak, or create any other flying hazard.



Pilotless Aircraft, flying an evasive course with the speed and maneuverability of jet fighter planes but controlled from afar by radio, will soon be testing the Navy's big antiaircraft guns. The aircraft will be Martin KDM-1 pilotless target drones, several of which have already been delivered for fitting into the "mother" airplane which will carry them aloft for launching. The KDM-1's are the result of successful flights made by the Gorgon IV pilotless aircraft which was designed and built by Martin in cooperation with the Navy to test the possibilities of the ramjet engine.

The KDM-1's, which have a wing span of only 10 feet, are released at the desired altitude from a pylon near the wing tip of the "mother" airplane. From then on, they fly on their own ram-jet power, controlled from afar by radio while being watched on a radar screen. Controls may be preset before launching, but may be overridden by radio at the discretion of the distant control officer.

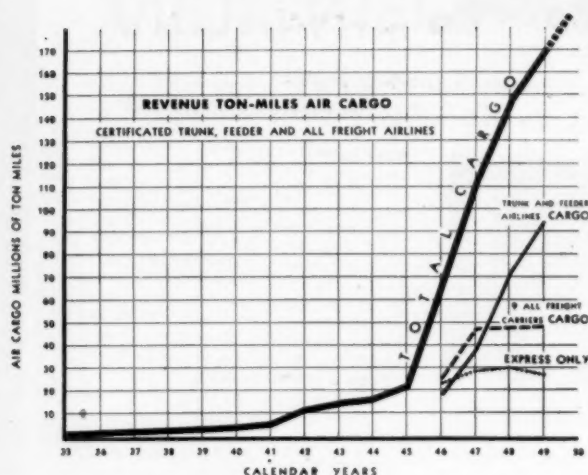
Martin AIRCRAFT

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Aircraft Since 1909

The Case for Large Air Freighters



THIS CHART illustrates the growth of air freight volume over the past 15 years. The progress has been excellent, said Donald A. Buck of Boeing at the California Air Freight Clinic, but the airlines have not begun to tap the tremendous air freight market.

The 170,000,000 ton-miles of air freight carried in 1949 is only 1/50th the country's air freight potential, according to Donald A. Buck, commercial representative of Boeing Airplane Co. In a paper delivered before the California Air Freight Clinic, which was held August 19-20 at Oakland, Buck declared that a study of the subject indicated that the air freight potential is roughly 10,500,000,000 ton-miles a year.

Buck based his estimate upon the possibility that an aggressive sales campaign pointing up the inherent advantages of air freight, such as increased sales value, wider distribution and reduced inventory, packaging costs, spoilage and warehousing, might capture as much as two per cent of the freight volume carried by the railroads. The 10,500,000,000 ton-miles is roughly 2% of the 527,000,000,000 ton-miles carried by the railroads last year.

Products of mines and forests, which account for 58% of the rail freight volume, will continue to be carried by rail, Buck admits, but the other 48% is vulnerable to air competition, these products being such that might be "advantageously and competitively" carried by air.

Larger Freighters Needed

One big factor in developing the new air freight market, Buck pointed out, is the necessity for new, larger aircraft. Speed and low operating costs, he said, are of the utmost importance in providing competition to the railroads.

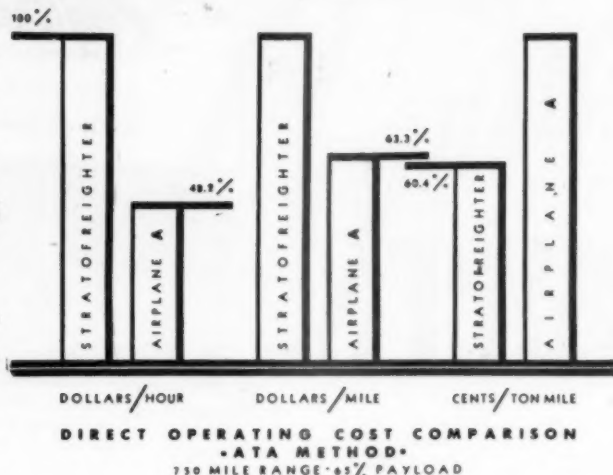
As an example of the type of equipment needed to compete effectively,

Buck pointed to his own company's Stratofreighter. Comparing the Stratofreighter to "Airplane A," a standard cargo type now in service, Buck claimed that on an average domestic freight run of 750 miles, the cost per ton-mile of the Stratofreighter would be only 60.4% of the cost for Airplane A.

The Stratofreighter's greater speed and much heavier payload (up to 22½ tons) combine to provide this ton-mile economy, Buck said, despite an admittedly higher hourly operating cost. On the same run, if each plane carried freight at a rate of 10c

a ton mile, the Stratofreighter would need only a 63.3% payload factor to pay all direct and indirect operating costs, while Airplane A could not carry enough payload to break even.

Also, he stated, it would require a fleet of 3,000 planes of Douglas C-54 capabilities to carry the 10,500,000,000 ton-mile air freight potential, while only 900 Stratofreighters, operating on an eight-hours utilization, 60% load factor basis could handle the same volume. The direct cost per ton-mile runs less than 4.5c at ranges up to 2,500 miles.



THE USE OF newer and larger aircraft is essential if the airlines are to compete with the railroads for freight volume, Buck said. This graph shows a cost comparison between the Boeing Stratofreighter and "Airplane A," a standard cargo type now in service.



Foreign Entry—U. S. feeder airline operators will now have a first hand opportunity to analyze the British-made Percival Prince. Atlantic Aviation Corp. at Teterboro Airport, N. J., will act as distributor for the 8-14 place feeder airplane. The Prince has a wing span of 56 feet, length 42 feet, 10 inches and height (to tip of rudder) 16 feet, 1 inch. Gross weight is 10,650 pounds, maximum S. L. speed 215 mph., cruising speed at 10,000 feet 212 mph. It is powered by two Alvis Leonides nine-cylinder engines developing 520 horsepower at takeoff.



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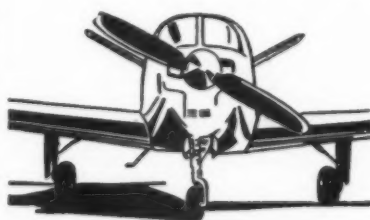
You make more calls when you cruise at a 170-mile clip. No wasted time, no wasted effort. Travel means more! Minutes in the air pay you back with hours of productive time.



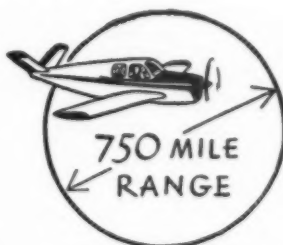
You get to where the business is in luxurious comfort. Room to spare for four big people in the smartly tailored, quiet Beechcraft Bonanza cabin. Maximum 5-way visibility.



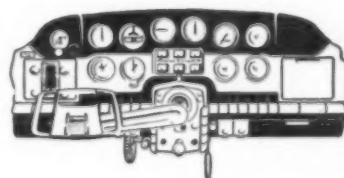
You travel in safety. The B35 Beechcraft Bonanza is extra rugged, withstanding shock and stress tests surpassing CAA requirements. All-metal construction.



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Airline First-Half Reports

Total \$6.7 Million Profit

Revenue-expense reports of seven additional domestic trunk and feeder airlines show an aggregate net profit of approximately \$1,200,000 for the first six months of this year.

Figures previously reported (AMERICAN AVIATION, Aug. 15) added up to an aggregate half-year profit of close to \$5,500,000 for American Airlines, Braniff Airways, Chicago and Southern Air Lines, Eastern Air Lines, Mid-Continent Airlines and Northwest Airlines.

Airline Six-Month Profit

Carrier	Net Income to June 30, 1949	Net Income to June 30, 1950	Change from last year
Capital	\$ 92,035	\$300,260	\$ +208,225
Continental ..	-4,638	1,804	+6,442
Pioneer	56,614	46,902	-9,712
TWA	731,000	1,436,000	+705,000
United	-175,754	-59,370	+116,384
West Coast ..	-44,302	-27,202	+17,100
Western	39,938	188,110	+148,172

Among the later reports, those of TWA, Western and Capital showed impressive gains this year over the first six months of 1949.

Capital Airlines reported a net profit after taxes of \$300,260 on revenues of \$13,414,248, compared with a net of \$92,035 on total operating revenues of \$12,562,473 in the first half of last year. Improved showing was made despite a reduction in company's mail pay from \$2,333,256 in the first six months of 1949 to \$2,194,572 in the comparable period this year.

Continental Air Lines reported a net profit of \$1,804 after taxes on operating revenues totaling \$2,866,790 for the first six months of 1950, compared with a net

loss of \$4,638 on revenues of \$2,746,717 in the first half of last year.

Pioneer Air Lines reported a profit of \$46,902 for the first half of 1950, compared with a profit of \$56,614 for the same period last year. Its passengers revenues were up 19% from \$700,073 to \$831,144.

Trans World Airlines earned \$1,436,000 after provision for taxes in the first six months of 1950, compared with a net of \$731,000 for the like period last year. Second quarter earnings of \$3,280,000 wiped out a first quarter deficit of \$1,844,000.

United Air Lines reported net income of \$1,934,311 for the second quarter of 1950, reducing the net loss for the year from \$1,993,681 in the first quarter to \$59,370 on June 30. Operating revenues totaled \$44,392,652 and operating expenses \$43,925 in first half of this year, compared with \$42,808,852 and \$42,443,370, respectively, in first six months of 1949.

West Coast Airlines reported a net loss of \$27,202 for first six months of 1950, compared with a loss of \$44,302 for the like period last year.

Western Air Lines reported a net profit of \$188,110 for the first half of this year, compared with a net of \$39,938 for same period last year. Second quarter profit was \$225,817, compared with \$168,467 last year.

B-36 Direct Operating Costs \$1,024.17 Per Hr.

It costs the Air Force \$1,024.17 to operate one Convair B-36 for one hour, Air Force testimony before the military subcommittee of the House Appropriations Committee reveals. The figure represents only the direct operating costs, for supplies, equipment, gas, oil, etc., and does not include crew costs and other indirect costs.

The following is a table, inserted in the printed hearings of the testimony, of the direct hourly operating costs of Air Force aircraft now in service:

Type of Aircraft	Cost
Convair OA-10 (PBY)	\$ 55.61
Boeing B-17	96.97
North American B-25	55.13
Douglas B-26	75.25
Boeing B-29	233.32
Convair B-36	1,024.17
North American B-45 (jet) ..	386.77
Boeing B-50	421.00
Beech C-45	18.61
Curtiss C-46	57.50
Douglas C-47	37.63
Douglas C-117	37.66
Douglas C-54	97.71
Douglas C-74	237.45
Fairchild C-82	79.27
Boeing C-97	272.40
Republic F-47	68.95
North American F-51	62.92
Lockheed F-80 (jet)	120.18
North American F-82	96.49
Republic F-84 (jet)	117.00
North American F-86 (jet) ..	145.11
Sikorsky H-5	40.54
Vultee L-5	8.54
North American T-6	13.84
Beech T-7	18.69
Beech T-11	18.69

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Prop Experiment—This is a montage conception of a new Air Force experimental program, the McDonnell XF-88B. Under the program, the USAF will add an Allison T-38 turboprop engine driving an eight-bladed Curtiss super-sonic propeller to the XF-88's original power plants, two Westinghouse J-34 jet engines. The propeller is a solid titanium model with a helical tip speed of about Mach 1.3 and a diameter of only about 10 feet, permitting installation without altering the undercarriage of the jet plane. Object of the program is to evaluate high-speed performance of turboprop engines and determine the limitations of supersonic propellers. The XF-88 was chosen as the experimental vehicle because of its extremely high speed capabilities—better than Mach 1 in level flight.

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SEPTEMBER 4, 1950

Fill U. S. Plants First

By James J. Haggerty, Jr.



THE GENERAL impression of the expanded military aircraft procurement programs seems to be that the aircraft industry is now engaged in an all-out, mobilization-type, production-to-the-hilt program, complete with round-the-clock shifts and Rosie the Riveter. Such is not the case.

The impression was an easy one to develop, due to the considerable publicity given the vast amounts of money requested by the Defense Department for aircraft procurement. The amounts were three or four times the figure spent in each of the last couple of years, as it was natural to assume that aircraft plants would be utilized to their full capacity.

Now make no mistake about it, the \$7.5 billion requested for new planes will certainly create a boom in the aircraft industry and provide for a production rate which even the most optimistic manufacturer couldn't have dreamed of 60 days ago.

In most cases, manufacturers have been ordered to step up production to the peak with the tooling they have on hand; in other words, if the pre-Korean schedule of a given plant was six planes a month and there is enough tooling available to build 20, the plant will turn out 20. This same plant, however, given additional tooling, might be able to turn out 60 planes a month. In no case that we know of is a plant scheduled for full capacity production; most of them will not even begin to approach their peak.

Recent Capitol Hill testimony by Brig. Gen. H. A. Shepard, the Air Force's director of procurement and industrial planning, gives a pretty good picture of the scope of the new expansion program as compared with an all-out effort. In the first place, Shepard told a Congressional committee, the current program will require only about one-third of the floor space used for airframe construction in World War II, and in the aircraft engine industry the new schedules will require only a little more than 10 per cent of the floor space devoted to engine production in the last war.

In most cases the new schedules require little more floor space than the pre-Korean schedules; manufacturers will simply build the planes faster in the same construction area. Shepard said he knew of "only one or two isolated cases" where additional floor space will be required. The floor space is available in reserve plants, should it be needed.

Personnel Outlook

The personnel picture also gives a good comparison. In World War II, in the peak year, about 800,000 persons were employed in the airframe industry. Before Korea the industry employed about 100,000; peak employment, by Shepard's estimate, under the new schedules should be in the neighborhood of 200,000. In the engine industry, employment under the new program should reach 50,000, compared with a war time peak of 300,000. In other words, employment in the combined airframe and engine industries under the accelerated program will probably not reach one-fourth the World War II figure.

Another item is the materials involved in the program. Some people, impressed by the dollar values in the plane-building program, have been predicting that the steel, aluminum and copper industries will buckle under the demands to be made upon them. Actually,

while the demands for those metals will be substantial, they will not give the industries nightmares.

Here are the official figures of the fiscal year 1951 requirements (including Army and Navy production of surface weapons like tanks and ships as well as planes): steel, 4,000,000 tons, about four per cent of the current production; copper, 175,000 tons, seven per cent; and aluminum, 100,000 tons, about 14 per cent. The bulk of these requirements are in the aircraft industry, since the shipbuilding program is negligible.

So, while the \$7.5 billion for planes will certainly make for a healthy industry and the new program might reasonably be called a "boom," it should be apparent that the industry is nowhere near saturated. It is important that the misapprehensions about the scale of the program be corrected, for the State Department chaps, always the champions of some country other than this one, are mumbling about pouring money into production facilities in foreign countries to provide a backstop for our "saturated" industry.

This is a fine idea when our industry reaches the saturation point; but in the meantime we had better make sure that U. S. industry gets all the dollars it needs to get healthy, because it may soon be involved in a contest of stamina.

Cost of 69 Groups

WE HAVE ALWAYS been aware that it would cost a lot of money to build up from the present 48 groups to a 69 group Air Force (the new equivalent of the well-publicized 70 groups), but until recently we have never seen any concrete figures as to just how much. The Air Force hearings before the military subcommittee of the House Appropriations Committee provide the answer.

Assuming that Congress passes the Air Force expansion bill, the USAF will spend \$28.2 billion over the next four years to reach the 69 group strength. Of the total, \$9.9 billion will go for aircraft procurement. After reaching the 69 group strength it will require an annual expenditure of \$7.2 billion, of which \$2.8 billion will be allocated for plane purchases.

The program breaks down this way: fiscal 1951, over-all cost (which includes operations, personnel, etc., as well as plane procurement) \$9.3 billion, \$4.2 for planes; fiscal 1952, \$6.9 billion over-all, \$2.5 billion for planes; fiscal 1953, \$5.6 billion over-all, \$1.2 billion for planes; fiscal 1954, \$6.4 billion over-all, \$2 billion for planes. Under this program the Air Force would reach its 69-group strength at the end of the calendar year 1953.

Note how the plane procurement figure drops sharply from fiscal 1951 to 1953, then starts to climb again and finally reaches a level-off point. The largest amount, of course, is needed right now to place long term orders for new planes and get the production lines started. Fiscal 1951 also includes the cost of Korean attrition.

In fiscal 1952 the schedule calls for a build-up to 58 groups from deliveries on orders placed now. Since the initial schedule calls for deliveries in 1953, you don't have to order as many planes in 1952, consequently the lower procurement figure. Same for 1953. But by fiscal 1954 the 69-group strength will have been reached, hence the larger procurement figure to support the larger Air Force.



"Have you seen the **BIG NEWS**
on Page 9?"

INDUSTRY PERSONNEL

Harold D. Koontz, manager of commercial sales at Consolidated Vultee Aircraft Corp. for the past two years and formerly assistant to the president of Trans World Airlines, has resigned his position to accept an appointment as professor of business policy and transportation in the School of Business Administration at the University of California in Los Angeles.

Ralph L. Bell, military liaison sales engineer for the Boeing Airplane Co., since 1946, has been promoted to assistant sales manager. Prior to joining Boeing, he was with The Glenn L. Martin Co. for 16 years, last serving as manager of conversion and overhaul.



Bell

Frank N. Piasecki, chairman of the board of Piasecki Helicopter Corp., has been elected chairman of the Helicopter Council, Aircraft Industries Association, succeeding **Agnew E. Larsen** of The Glenn L. Martin Co.

J. E. Hartwell, former superintendent of conversion for Convair at Fort Worth, has been named superintendent of the B-36 assembly line at San Diego, replacing **T. H. Hunt**, who was made night superintendent of all factory operations. **R. R. Hoover** has been named project engineer for the B-36 program at San Diego and has been replaced as supervisor of aircraft service by **J. F. Aiken**.

Al Cline, director of public relations for Northrop Aircraft, Inc., has been elected chairman of the Public Relations Advisory Committee, Western Region, of the Aircraft Industries Association.

PRODUCTION SPOTLIGHT

Business from MDAP: The Mutual Defense Assistance Program, or foreign arms program will be a source of more than \$1.1 billion worth of business for airframe, engine and component manufacturers in fiscal 1951. This is over and above the Air Force and Navy procurement programs.

The scope of the MDAP purchasing program was disclosed for the first time in hearings before the military subcommittee of the House Appropriations Committee by Maj. Gen. Lyman L. Lemnitzer, director of the Office of Mutual Assistance in the Department of Defense.

Here is Lemnitzer's breakdown of the MDAP expenditures planned for fiscal 1951 through Air Force procurement channels:

	Original 1951 Appropriation	1951 Supplemental Estimate
Aircraft and aircraft spares	\$ 179,476,958	\$ 872,555,421
Aeronautical equipment and supplies	26,921,649	37,488,089
Total	\$ 206,398,607	\$ 910,043,510
Grand total (both requests): \$1,116,442,117		

In addition, MDAP will buy \$89,000,000 worth of electronic equipment through USAF channels, broken down as follows:

	Original 1951 Appropriation	1951 Supplemental Estimate
Radio and radar	\$ 28,364,424	\$ 47,547,457
Wire communication	3,008,304	4,100,358
Miscellaneous equipment	6,117,319	.....
Total	\$ 37,490,047	\$ 51,647,815
Grand total (both estimates): \$89,137,852		

About \$32,000,000 worth of aircraft, spares and supplies will be bought through Navy channels. In addition, MDAP will buy \$51,000,000 worth of electronic equipment through Navy channels, but there is no breakdown available as to what proportion is aviation equipment.

Navy Procurement: The hearings also disclose the extent of the aircraft procurement programs of the Air Force and Navy over the next four years. In addition to the \$9.9 billion the Air Force will spend for planes between now and the end of fiscal 1954 (see opposite page) the Navy will spend \$7 billion over the same period. The Navy is asking \$2.2 billion to start its build-up this year, \$1.8 billion to follow it up in fiscal 1952, and \$1.5 billion in fiscal 1953 and each year thereafter. These estimates are based on the assumption that plane costs will remain the same as they are now; in all probability the estimates will have to be revised upward.

Inconsistent Security: The respective planned rates of Air Force and Navy plane production under the expansion program are supposed to be a big secret in the Pentagon. As a matter of fact, a number of minor items have had the classification stamp slapped upon them because they might give an indication of the production rate, which in turn gives an indication of our combat potential. But with the complete inconsistency that characterizes military security these days, the production rates are included in the publicly-disseminated Congressional hearings mentioned above. They are: for the Air Force, 320 planes a month; for the Navy 200-250 planes a month. This compares with the combined production rate (for both services) of 215 a month in pre-Korean days.

XC-120 Flies: Fairchild Aircraft Division's XC-120, Air Force detachable fuselage transport, is being test flown at the company's Hagerstown, Md., plant. The plane made its first flight on August 11 and has since made a number of subsequent flights. First flights were made with the pod, or fuselage, attached but at press time the flight test department was preparing it for first flight without the pod. The quadricycle landing gear, the cause of considerable trouble with the plane during its engineering stages, has given no trouble in the flight program.

—J. J. H.

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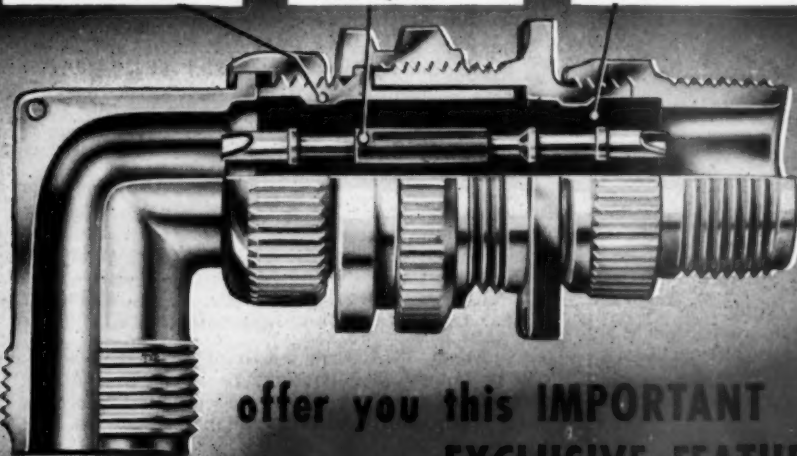
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American Aviation Flight Assessment...

3--The Aero Commander

By RICHARD G. WORCESTER

(Editor's Note: This is the third of a series of reports on the flight characteristics of current aircraft models.)

AFTER about 450 hours of flying, the prototype 4,600-lb. Aero Commander 4-5 place feederline with two Lycoming 190-hp. engines was certificated on June 30. Built by Aero Design & Engineering Corp., Culver City, Calif., it is now being assessed by the Army and USAF as a military transport or as a light twin-engined trainer.

An alternative version 22 inches longer with seven seats and two Lycoming 260-hp. engines is being planned and both models will be improved by using Hartzell constant-speed, feathering and braking hubs in place of the present variable pitch units approved for a 200-hour overhaul life. The designers have recognized that the Boeing 582 or Flader J-55 light turbines may be available by the time the Commander is in production.

The cockpit, seating, controls and instrument panel are all satisfactory. Static friction on the aileron was 5 lbs. and 8 lbs. on the elevator while taxiing. Steering is easy with differential brakes or engines. Forward view over the nose is 11°; however, lowering the top line of the instrument panel two inches would give about 14°.

Steady Takeoff

Full throttle for takeoff produces no swing. For a short takeoff it becomes necessary to raise the nose steeply, and the angle of attack is then about the same as the present view over the nose, so every degree of forward view would be welcome. At about 50 mph., IAS, the aircraft leaves the ground cleanly and an indicated climb of over 1,000 ft./min. can be made, hands off, at 110 mph., IAS, (116 mph., TAS) using 27" hg and 2,500 rpm (cylinder head temp. in a broiling Washington day was 70° short of the 270° placard).

The gear goes up electro-hydraulically in 18 seconds, causing no change in trim. If 20° of flaps are used at takeoff and removed on the climb, there is a slight sink. While climbing the Commander proved to be, stick-free, positively stable longitudinally and directionally. Laterally, stick free, the stability revealed the most unusual characteristic of the aircraft by the very marked degree of neutral stability. (CAA requirements call for positive lateral stability at the placard speed).

The Commander is one of the few aircraft with rock-like lateral neutral stability at lower speeds. In a trial period of 30 seconds during a 15° banked, full-throttle climb, the wing remained down as if an auto-pilot were at work. There is no doubt that

neutral stability like this simplifies an instrument climb out of an airfield.

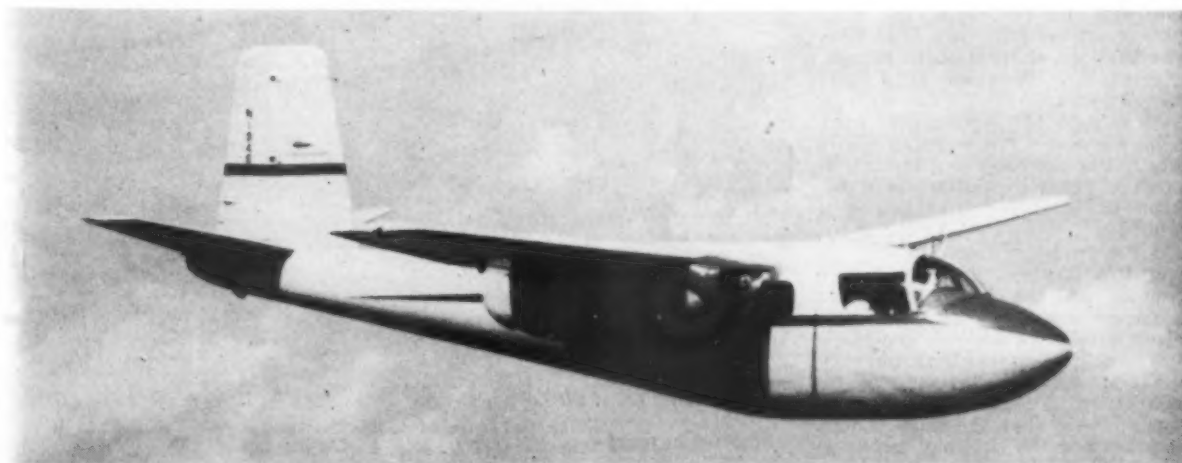
Leveling off at 6,000 feet the aircraft showed itself to have a rate of yaw of over 15°/sec. and a rate of roll of 60°/sec. both at 150 mph., IAS. The controls are light and responsive and the gradient of elevator control force was about 15 lbs./g. at 150 mph., IAS.

Stability Characteristics

Longitudinally, the airplane has stick free positive stability, and, directionally, the aircraft returns to its original heading quickly after displacement—which is not surprising considering the large plate area. Laterally, the aircraft at 150 mph., IAS, was still firmly neutrally stable; it goes more positively stable with speed increases but, even so, it is probably only marginally positively stable at the placard speed.

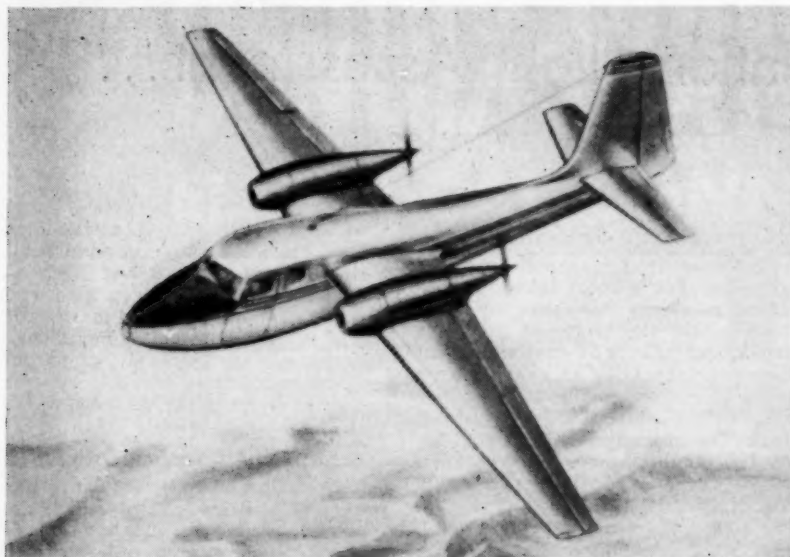
There was, for instance, still a trace of neutral stability at 225 mph., IAS, which is 20 mph. short of the placard. The ailerons are mounted from the rear spar at 67% chord. The ailerons, and the other two sets of controls, are 25% aerodynamic and 100% mass balanced. Trim tabs are on the tail surfaces.

With one engine windmilling, the aircraft can be held on the rudder or easily trimmed out with the tab holding the rudder over 5°. Asymmetric power flying is comfortable at



New Light Transport—The Aero Commander 4-5 place airplane is powered by two Lycoming 190-hp. engines and can sell for \$25-30,000. An

alternative arrangement with a longer fuselage is planned and the model could mount Boeing 502 or Flader J-55 turbines in place of Lycoming 260-hp engines.



Tomorrow's Commander? This is a Boeing artist's sketch of a plane like the Aero Commander powered by two turbo-prop engines such as the Boeing 502. Bleeding air from the engines to provide 11,000 foot cabin pressure altitude at 20,000 feet actual altitude, the plane would have a service ceiling above 30,000 feet and cruising speed would be approximately 250 mph at 20,000 feet. By 1952, Boeing engineers say, the 502 would have a take-off rating of 254 horsepower. Even today the 502 is 270 pounds lighter than a comparable piston engine and its dimensions are only 22 x 19 1/4 x 43 1/2 inches.

95 mph., IAS, which is also the best speed for max. L/D of 13.1. flaps up. The company has measured a 300 ft./min. sea level climb in this condition.

The elevator trim is on the powerful side and will take charge above 120 mph., IAS. Possibly this would only be 110 mph., IAS, in the hands of a woman pilot which is uncomfortably close to the climbing speed.

Stall Warning

A full range of stalls showed that using full power, clean, the stall warning—in the form of a faint control vibration—starts at about 10 mph. before the flow breakaway at 59 mph., IAS, or 68 mph., TAS. The angle of attack is then 18° including 3° wing set on the body. The warning comes early but is not boisterous enough in its effect. (It is impossible for a designer to build in too much stall warning.)

At the stall the nose and the left wing drop together, the wing falling about 35° and the change of heading on recovery is about 25°. With full power, flaps down the stall is delayed to 37° angle of attack. With the stick on the aft elevator stop the elevator itself is up 20°. The stall comes at 40 mph., IAS, after the usual control vibration and the nose and left wing fall together.

With flaps full 40° down, unless the nose is held up sharply there will be no clean break and the aircraft will

mush down. With the right engine at full throttle and the left one windmilling, the stall comes at 60 mph., IAS, clean and the nose falls and the left wing drops more steeply. Aileron control is retained right up to the stall in each case. The wing is a

12% t/c NACA 2300 series section with aspect ratio of eight and taper ratio of three.

It is hard to be constructive about this wing drop. If a spoiler were put on the right wing to induce a root stall some pilots might prefer it, but they would have to accept the lower CL_{max} and the edge higher landing speed which goes with it.

The controls at cruising speed are roughly in harmony with each other and remain so in a dive up to about the placard speed of 245 mph., IAS, which is fixed at 44 mph., IAS, more than the level maximum speed. The airplane meets the CAA stressing requirement of 3.8 x 1.5 at 4,600 lbs. weight. The factor at 4,200 lbs. is 4.46 x 1.5 but the airplane exceeds it by hitting 4.57. So although at 4,200 lbs. it is, strictly, in the normal or non-acrobatic category, the airplane can be flung around without the pilot losing his peace of mind.

Maximum speed for gear and flap (30 sq. ft.) operation is 125 mph., IAS, and the flaps cause a slight nose down change in trim. The forward view during power-on or -off approaches at about 80 mph., IAS, is good and the landing presents no problems to the Bonanza or Navion pilot.

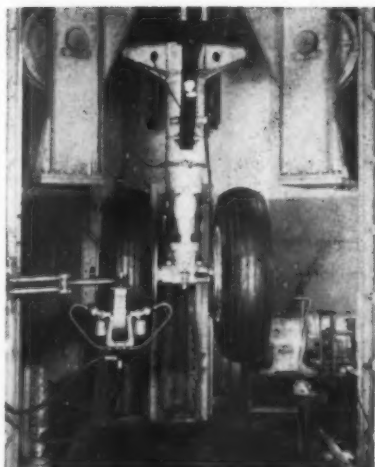
Adding it up, the Commander has a good cockpit, and instrument layout; the aircraft takes off, flies and lands easily, and the controls are pleasant to handle. No vices were apparent, although no final pronouncement can be made until the projected spin trials are completed.



Spare Carriers—The pod attached to the fuselage of this Convair B-36 is an engine nacelle carrier by which the B-36 can transport four of its own spare power plants on ferry missions (it carries a pod on each side of the fuselage, suspended from bomb racks). Each pod holds two Pratt & Whitney R-4360 Wasp Major engines plus accessories, cowlings and engine mounts. The pod installation has been flight tested.

Design Trends

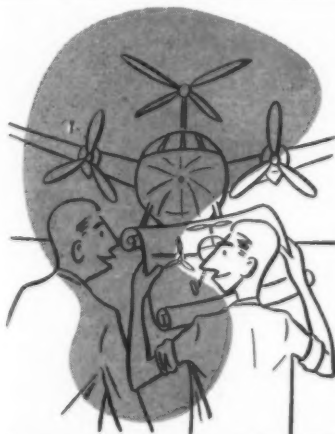
By Richard G. Worcester



Drop Test—A new device recently assembled by engineers at Bendix Aviation Corp. and shown here is capable of spinning heavy aircraft wheels at speeds equivalent of 150 mph. ground speed in order to provide conditions nearly duplicating actual operation during the drop test of landing gear assemblies. The power source is two 12 hp hydraulic motors.

CAA Airworthiness Directives

Certain Continental engines have been involved in a number of instances of shearing of the square corners of the oil pump drive shaft with resultant almost immediate engine failure. All model E185-3 engines numbered 4514-D and below, E185-1 engines numbered 4566-D and below and E165-2 engines numbered 10024 and below (used on Navion, Beech, Bonanza, Cessna, and Luscombe aircraft) are required to be inspected each ten flight hours until the parts are proven satisfactory by tear-down inspection and/or replacement. Inspection shall consist of inserting Continental Drive Fit Indicator in slot of tachometer drive shaft and taking a reading; total back lash should not exceed 15°. Compliance required by Airworthiness Directive 50-32-1.



"Have you seen the BIG NEWS on Page 9?"

ANYBODY reading the weekly press headlines on air affairs must be forgiven for thinking that aviation is buffeted from one crisis to the next with its progress marked by a continual series of noisy upsets, rows and sudden revelations. These tarradiddles are out of touch with reality because research and production contracts are let in a rotational yet irrational pattern, things move along gently and, where there are changes in thinking about design and engineering, they are given much thought and discussion.

Technical trends move slowly—imperceptibly at first. The lenticular wing, for instance, is giving way to the double-wedge section but such a change will not happen this week or this year. The transition is with us all the time. The technical differences between competing aircraft have, on the whole, been greatly exaggerated. NACA and private research facilities are spread evenly through industry and so the comparative efficiency of the final products tends to be but marginal.

The essential thing then becomes the need to **keep plants busy and avoid pockets of idleness** resulting in the flight of skilled workers to other industries. The greatest influence which design normally exerts is upon the size of a production order rather than the choice of aircraft. But there is always room in the appropriations to reward the company which can build a product with more than the usual edge in performance.

The high speed aircraft of the future, we find, is going to look like a tropical fish by Picasso. Here are some specific trends—first, there can be no external loads, so fuel, rockets, radar, powerplants and the human supervisor must jostle for position on the c.g. Aspect ratios will go down from 5.5 to 3.5 and thickness-chord ratios now 10 and 11 will go down to 6. Existing positions of the maximum thickness ordinate varying between 30 and 65% must ultimately settle at 50%. Fuselage fineness ratios now around 7.5 will rise to 10 and more.

Ultimate strength factors now 11 will advance to 18 and 20 with small-elongation materials and with pilots using improved anti-g suits. Wing loadings now in the sixties will unfortunately advance to the eighties and wing skin thicknesses now $\frac{1}{8}$ " will increase to over $\frac{1}{2}$ ". Undercarriages now weighing 4.5-5.5% gross weight will gradually reduce to nothing with the undercarriageless vertical-takeoff fighter. Some experimental aircraft already embody a few of these features but most of them are still as rare as a two-dollar bill.

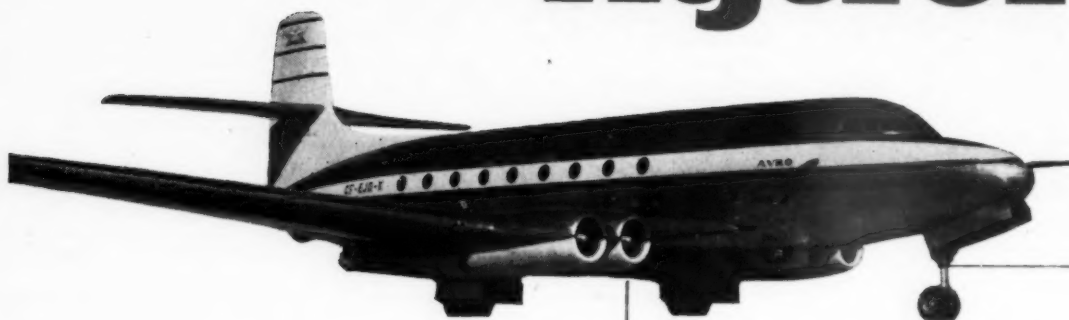
Listing of the operational aircraft nearly completed but not yet flown seems to reveal a disturbing degree of lop-sidedness in the military sponsoring of new projects. The Navy has four designs including the Grumman XF10F-1, the Douglas XF4D-1 Delta, the McConnell XF3H-1 and the Lockheed XP3V-1 bomber. But the USAF has only one long range project—the Boeing XB-52. The USAF has everything in the world to choose from—ranging from a supersonic flying boat fighter to at least eight different design proposals for a vertical-takeoff fighter. Developing existing experimental designs like the Lockheed XF-90, the North American XF-93 and the McDonnell XF-88 covers the immediate future but the plans for 1955 must be formulated now.

The recent proposed CAR revision of the DC-3 landing weight proves the oldest rule in aviation—which is the more you put into a design the more you can take out in terms of efficiency. To get a new structure right means breaking the test pieces at 100%, but it is not uncommon these days to snap some bone in a wing at 70% while the tail structure doggedly resists all attempts to break it to 130%. In the U. S. there are resources to smooth out all the bad structural irregularities but a European company faced with this situation might be compelled to beef up the wing but condemn the aircraft to carry the extra weight in the tail. Aviation engineering is like gambling in Las Vegas—the man with the money often seems to win.

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Beech T-34—Military version of the "Mentor," the T-34 is the first aircraft to be type-certificated under CAR Part 03 in the unrestricted acrobatic category. Three T-34's are being delivered to Randolph Field for evaluation with the TEMCO T-35 and the Fairchild T-31 as basic trainer replacements to the North American T-6.

Beech T-34 First To Get Unlimited Acrobatic Rating

The Beech T-34, developed from the Bonanza by Beech Aircraft Corp., Wichita, Kans., has become the first aircraft to be CAA type-certificated in the unrestricted acrobatic category, of CAR Part 03. Three of the T-34's (also known as Model 45 Mentor) are being delivered to Randolph Field for evaluation with the TEMCO T-35 and the Fairchild T-31 as basic trainer replacements for the World War II North American T-6.

T-34 performance compares well with that of the old 650-hp. T-6, although it is equipped with a lower-powered, 220-hp. Continental E-225-8 engine. It is estimated that, with a utilization of five hours a day during a five year period, the T-34 would save 150,000 gallons of fuel over the T-6. Also, there would be a commensurate saving in engine maintenance cost of \$9,750.

Development of the aircraft was started by Beech before the contract for three trainers was awarded in March, with the first Mentor taking to the air on December 2, 1948. Therefore, although the plane has just received type certification and is a new product, as far as the Air Force is concerned, any procurement would be "off the shelf."

The all-metal, tandem T-34 has retractable landing gear, rate of climb of over 1000 fpm., a 167-mph. true airspeed with 60% power at 10,000 ft.,

a range of 770 miles on 50 gallons of gas and a design dive speed of 280 mph., IAS. Takeoff over a 50-ft. obstacle requires 918 ft., and the aircraft stalls power-on with gear and flaps extended at 50 mph., IAS. Stalls are accompanied by noticeable tail buffeting and recovery from spins

takes less than one turn. For dual instruction, the instructor riding in the rear seat has enough headroom to raise the seat to a higher level than the student's to give good visibility on landings.

The T-34 is the only entry in the Air Force evaluation which has a tricycle landing gear. This allows excellent visibility on the ground, facilitates operation in high winds and adds to short-field performance. Beech considers the gear a training asset since most modern transport and combat aircraft are equipped with tricycle landing gear.

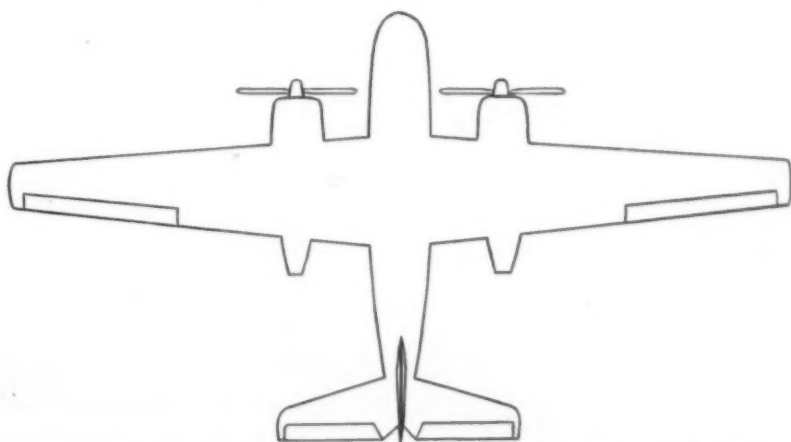
Beech T-34 Performance

At 2,600 Pounds Gross Weight

Cruising Speed at 10,000 feet at 60% power	167 mph TAS
Top Speed, sea level	188 mph TAS
Design Dive Speed	280 mph IAS
Service Ceiling	21,200 feet
Rate of Climb, first minute	1,210 fpm
Range at 10,000 feet at 60% power, 50 gallons	770 miles
Fuel Consumption at 60% power	10.8 gph
Landing Speed, full flaps	54.3 mph
Landing Distance over 50-ft. obstacle	820 ft.
Takeoff Distance over 50-ft. obstacle	918 ft.

Specifications

Wing Span	32' 10"
Length	25' 10"
Height	9' 7"
Wing Area	177.6 sq. ft.
Wing Loading	15.5 lbs./sq. ft.
Power Loading	13.4 lbs./hp.
Engine	Continental E-225-8 (220 hp for T/O)
Propeller	Beech Model 215-207 (all metal)

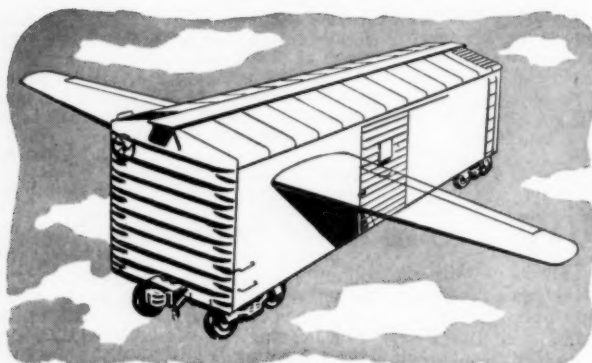


New Patrol Model

This diagrammatic planform shows the layout of the new Grumman anti-submarine aircraft and it also conforms closely with a parallel project at Curtiss-Wright. Warload of this type of airplane would be a mixture of sonobuoys and either seeking missiles or depth charges. Normally the sonobuoys are stowed externally but the nacelles of this aircraft are large enough for some, at any rate, to be accommodated inside adjacent to the undercarriage. This would then leave the main bomb bay free for the weapons.

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CAR Review—A Two-Week Experiment

By WILLIAM D. PERREAULT

LAST MONTH the Civil Aeronautics Board worked with the Civil Aeronautics Administration and industry to produce an interesting experiment in the handling of proposed changes in civil air regulations. In two weeks of continuous meetings industry and government groups worked over a long agenda point by point with good results.

There were hopeful indications that CAB could and would expedite the rewrite of CAR Part 3 relating to certification of light aircraft, that a sound policy toward helicopter certification rules is underway, that manual material interpreting CAR would be cleaned up and minimized, and that, in general, regulations can be made workable.

In the past CAB had periodically thrust newly proposed regulations for the certification and operation of aircraft upon the industry with little or no prior correlation with their representatives. This placed civil aviation groups on the defensive. To prevent such proposals from becoming law it had to be proved that they were impossible of accomplishment, illegal, premature, economically impossible, incompatible with other established operating procedures or otherwise out of order.

Two-Week Session

In January, CAB collected comments and specific proposals for additions, deletions, and amendments to civil air regulations from the industry. These were included with others from CAB and CAA to form a two-week working agenda which was circulated several months ago to all interested parties. Even prior to the formal convening of the meeting on August 7 the maneuvering began.

The Aircraft Industries Association, representing the manufacturing industry, and the Air Transport Association, representing the scheduled airlines, notified CAB that the press of their work with the military made it impossible for them to participate in the meeting with adequate representation. They wanted discussions of CAR Part 4b, one of the major issues, and that on Parts 13 and 14 on powerplants to be deleted from the agenda.

In acknowledging their request, CAB commented "(it) is not intended to be an indefinite postponement of consideration of these items. On the

contrary, the Bureau will continue its study of the problems in these fields, and will, where it finds such action necessary, propose amendments of existing regulations."

In the way of verifying this stand, CAB immediately published as a proposed ruling in the Federal Register one of the more controversial issues: accountability for humidity as well as temperature in computing aircraft performance.

Airworthiness Issues

The meetings got underway with a discussion of major civil airworthiness issues. In theory all mandatory regulations are part of CAR. In fact the Civil Air Manuals which supplement the regulations are often replete with mandatory requirements. In discussing this situation the industry urged several considerations in the formulation of Manuals:

(1) **Manuals should stick to interpretation**, including outlines of means of compliance.

(2) **If used, they should be released as soon as possible** after the regulation is made available.

(3) **Manual material should be based on a fixed set of qualifying rules.**

The conference considered the problem of design changes which are made after the airplane is in service, applicability to service aircraft, applicability to production airplanes of the same model and the yardsticks which might be used in determining if a specific model was new or simply an advanced design of the original plane. Needless to say, no conclusions of import were reached. It remains a matter of considering individual cases.

The matter of equivalent safety standards was virtually sidetracked. The Air Line Pilots Association is on record repeatedly as being against the acceptance of equivalent standards of safety as used in the past. Specifically the pilots feel that CAA and the industry in effect changed the existing civil air regulations without the benefit of public notice when they accepted automatic feathering of propellers in lieu of certain performance requirements on post-war transports.

ALPA representatives urged that all major issues of equivalent safety,



Ground Test—This new engine test stand, consisting of a B-36 inboard nacelle and wing section, was recently set up at the Convair plant in Fort Worth to provide realistic testing conditions for the P&W R-4360 engines which power the Convair bomber and to obtain service life data on nacelle components. A 400-horsepower electric motor drives a special blower which forces 90,000 cubic feet of air per minute through the nacelle to duplicate flight conditions. The lower work platform of the test stand retracts out of the way of the propeller during tests.

TECHNICAL NEWS DIGEST

• **CAA has reaffirmed its intention to start using nautical miles rather than statute miles in expressing speeds and distances, starting in mid-1952.** This is in accordance with ICAO recommendations and military practice. A nautical mile is 6,080 feet as compared to 5,280 feet in a statute mile.

• **TWA has contracted with Collins Radio Co. for 201 51R-2 omni-range receivers, 90 51V-1 VHF glide slope receivers, 80 17L-2 VHF transmitters and 33 18S-4 HF two-way radio telephone sets.** Equipment is for use in their new Martin 4-0-4's and to complete omni-range installations in their Constellations.

• **A proposed CAR now being circulated would permit certain non-transport category airplanes, including the Lockheed 18 and Douglas DC-3, to use a maximum landing weight equal to the maximum takeoff weight.** This would raise the DC-3 landing weight from 24,400 to 25,200 pounds and the Model 18 from 17,500 pounds to 18,500.

• **The electronics industry has orders for about \$1,500,000,000 in military orders for completion between now and the end of the year and close to \$2 billion total, according to the Radio-Television Manufacturers Association.** Peak electronic production during World War II was about \$4 billion per year.

• **A five-man mission from the civil aviation branch of the Italian Ministry of Defense has arrived in this country under the auspices of the Economic Cooperation Administration to study aviation here under the guidance of the CAA.**

• **The Extraordinary Administrative Radio Conference scheduled to meet in The Hague during September has been postponed indefinitely due to international conditions.** Among other things it was to have approved aeronautical frequency allocations.

• **Douglas DC-6B's now in production for American Airlines and United Air Lines will be equipped with three-bladed Hamilton Standard solid dural propellers instead of four-bladed hollow steel props as used on earlier DC-6's.** The switch will save the airlines about \$25,000 per airplane.

• **Domestic U. S. capacity to produce and refine petroleum has increased about 25% since the peak demands of World War II, according to the American Petroleum Institute.** U. S. crude oil production capacity has increased 27%, refining capacity has increased 21% and proved crude oil reserves have increased 24%.

• **Pan American Grace Airways has successfully completed the first of a series of assisted takeoffs from the airport at Quito, Ecuador, which will determine whether it is feasible to use the Aerojet Jato units to provide Quito with regular four-engine transport service.** In the first tests four Jato bottles were used. Pan American and Braniff are both authorized to use Jato assisted takeoffs at La Paz, Bolivia.

• **American Overseas Airlines planned on moving its maintenance and shop work to new hangars at New York International Airport by the first week in September.** Previously major maintenance on the AOA Stratocruisers and Constellations had been done in American's hangars at La Guardia Field.

• **Northeast Airlines has modified its fleet of Convair Liners by the addition of pressurization equipment at a cost of about \$50,000 per airplane.** Most Convairs were delivered with the pressurization equipment.

• **Robinson Airlines reports that use of the omni-range equipment over their route from Binghamton, N. Y., to Newark, N. J., has cut 15 minutes off the 57-minute scheduled flight time by eliminating two or three dog-legs.** Robinson claims to be the first airline to have its entire fleet equipped with the omni-range equipment and the first to have approval for using it on all their routes.

• **Northeast Airlines has sold three Douglas DC-4's to Los Angeles Air Service of Burbank, Calif.** First delivery was made on August 1 and the remaining two in mid-August.

issues affecting more than one airplane model, should first be circulated in the same manner as required by law of CAR's, which they in effect amend. While most of those present agreed that the automatic feathering issue was extreme, they felt that it is absolutely necessary for the Administrator to have this authority to accept equivalents and that in most cases it is impractical to provide public notice. The final stand appeared to be against public notice but it would remain up to the Administrator to determine each case on its own merits. No specific rule is likely.

Recently, CAA's George Haldeman gave a paper before The Institute of the Aeronautical Sciences outlining CAA's views on design requirements of jet transports. It was the first official view to be expressed and one helpful to the design engineers. During the course of the review, and incorporated in prepared papers which were part of the discussions, CAB representatives made it clear that engineers have yet to get the full story.

Like CAA, CAB felt that seats in transport category airplanes should be stressed for 20-G crash load factor to reduce injuries during a crash. But CAA had agreed to accept inward-opening doors to ease pressurization structure requirements. CAB would require that each aircraft have at least one full-size door in the rear cabin, that such doors open outward and be operable from inside or outside the aircraft.

Manufacturers have expressed their desire to keep all openings in high-speed aircraft at a minimum size and keep the number of openings to a minimum. CAB would require one emergency exit opening for each eight passengers and require each to be at least two feet by three feet in size. The bottom of these exits would have to be at least as high as the tops of the chair arms.

Aircraft Stressing

Because many of CAB's proposals were covered by portions of CAR Part 4b, which was not given thorough treatment, some of these proposals did not enter into the verbal discussions. Primary consideration was given to the proposals for stressing aircraft for higher load factors. Industry representatives urged that until substantiating data can be provided no re-evaluation should take place.

As in so many other instances, the meeting concluded that "a study" should be made of the matter. Of necessity stress factors have many arbitrary aspects. If changes are to be made, it is wise to first determine the best change possible. Meanwhile, CAB had some interesting comment to offer. It noted that the Navy



Final Exam—This is the inside of the Douglas DC-3 which the USAF at Wright-Patterson AFB has especially rigged for determining pilot reaction during flight. The consoles shown here record aileron, elevator, rudder, throttle, and prop-governor position; elevator, rudder and aileron pressure; airspeed, altitude, angle of bank, vertical speed, glide path, localizer, rate of turn, pitch, inclinometer, and grip tension on the control wheel. A voice recorder and camera give a time-synchronized record of pilot comments and reactions.

stresses its aircraft for a crash load factor of 20 G's and that the Australians stress theirs for 25 G's. CAB officials stated that the human body can take much more than the load imposed by a 20-G belt without ill effects, and stressed the fact that the Board's records show "many cases in which fatalities resulted in otherwise survivable accidents as a result of seat belts failing and seats tearing loose on crash impact."

Until further substantiating data is available there appeared to be little chance of improvement.

Today non-transport category airplanes, whether Piper Cubs used for personal pleasure or Curtiss C-46's used in cargo operations, all have their structural and performance requirements measured by the same yardstick, CAR Part 3. Consequently the lightplane manufacturer is faced with the necessity of meeting requirements far in excess of common sense.

Lightplane Burdens

In appearances during the annual review, Dr. Lynn Bollinger, representing the Harvard Business School, the Helio Aircraft Company and the Aviation Advisory Committee, urged that the restrictions and tests required by Part 3 imposed impossible economic burdens on the manufacturer and designer which has served to retard lightplane design progress. Bollinger, who with Dr. Otto C. Koppen designed and is now carrying out certification tests of the famed Helio-

plane, had first-hand experience with the full implications of such rules.

Bollinger's case was backed by Crocker Snow, who appeared representing the National Association of State Aviation Officials, and by Merrill Armour, representing the Aircraft Owners and Pilots Association. Snow urged that the CAB should give close attention to NASAO's earlier resolution on this subject. Following "extensive study of the regulations which presently exist . . . it is our opinion that they are fundamentally wrong in that they cause the Federal government to be primarily concerned with the academic details of aircraft design, rather than with the performance and safety of the finished product."

NASAO Proposal

Principal feature of the NASAO proposal appeared to be the provision that flight tests should be used to determine compliance with minimum regulatory requirements. Using a V-G recorder the airplane structure should be proved by flights under the conditions required, stability and control should be determined, etc. Prior to certification the plane would also have to complete 150 hours of flying.

Charles A. Parker, executive director of the National Aviation Trades Association, stressed that the aircraft manufacturer should be given full responsibility for the engineering

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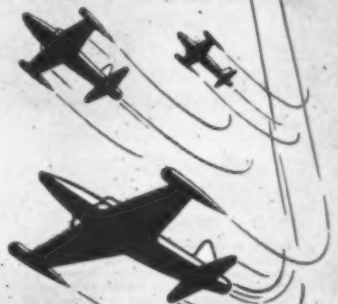
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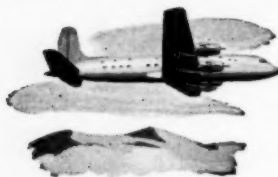
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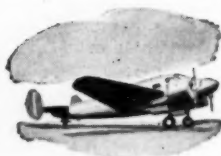


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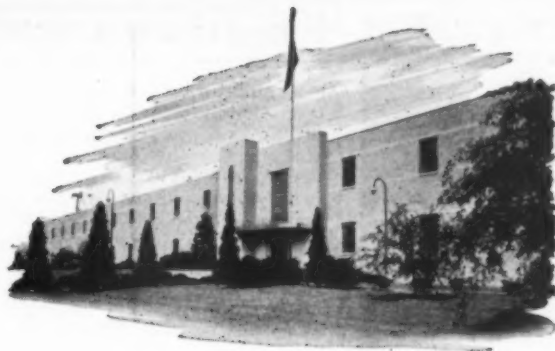
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perfection of Radar, G.C.A., Omni-Range navigation systems and others? Here again, no, for many users of Bendix aviation equipment may not be aware of this. The answer, then, must rest on the performance of the equipment itself. Bendix Radio has constantly *proven its superiority* through years of service all over the world and under every conceivable set of flying conditions. Remember this the next time you purchase aircraft radio equipment—there's a *reason* why more planes fly more miles with Bendix Radio than any other make.

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and structural decisions, that flight tests should be permitted instead of static load tests and engineering analysis (at the manufacturer's option) and CAA could request specific verification where unconventional methods or designs were used.

The NATA suggestions were quite similar to those of expressed by AOPA's Armour.

Category Proposals

The sentiment for simplification of lightplane certification requirements was universal and something will be done about it. But there is still a lack of agreement on what airplanes should be considered lightplanes. CAA proposed a 12,500-pound weight limitation for the smallest aircraft, another category for those planes under 12,500 category in the lightplane class but used in transportation of passengers under CAB's single-engine transport privileges.

CAA had previously proposed (and repeated during the review) a system to delegate type, production and airworthiness certification responsibility to experienced manufacturers for aircraft with gross weights of 5,000 pounds and under and not more than five-passenger capacity. CAA's legal department is now studying the legal aspects of such a proposal in the light of the duties assigned CAA by the Act.

Meanwhile, CAA presented a seven-

point program aimed at simplifying certification. One of the major CAA proposals was the elimination of take-off and landing distance performance measurements and the corresponding portion of the airplane flight manual. This would make unnecessary the "unduly burdensome and expensive" testing and analysis which they cause. The greater part of these requirements would then consist of flight tests in which the characteristics are proved normal.

Deletion of design detail such as that of ribs, external bracing, fabric covering, etc., were also suggested by CAA as means of simplifying regulations.

It was agreed that there is a need for simplification of these certification procedures and that it will require a complete rewrite of the CAR Part 3. This was a major accomplishment and is likely to produce action.

Helicopter Regulations

In 12,000 flight hours of helicopter operation flying air mail, Los Angeles Airways has recorded some 125,000 landings and takeoffs. It has also recorded some experience with outmoded rotorcraft regulation.

Said Clarence Belinn, president of LAA, "we somehow feel we are making the foot fit the shoe, and that if the rotary-wing industry continues to expand in scope and complexity, an entirely different approach will be



Foreign First—Shown on the instrument panel of the KLM Lockheed Constellation is a Sperry Zero Reader, the first Zero Reader installation to receive CAA approval for use in commercial scheduled airline service. The Zero Reader, which combines the readings of five instruments to provide the pilot with a simple coordinated reading, has been in production since March of this year and is now standard equipment on two USAF fighter types. Shown in the cockpit are (left) Captain George Malouin, general flight superintendent of KLM and Lincoln F. Stock, CAA advisor.



LAA Proposal—This is the 16-24 passenger helicopter which has been designed by Los Angeles Airways as a practical combination military and commercial helicopter. Of cantilever construction, the craft would have a gross weight of 16,000 pounds and be powered by two 800-horsepower engines. It would have a sea level airspeed of 125 mph. Fuselage length is 55 feet, width 9½ feet, overall height 18½ feet and rotor diameter 73 feet.

necessary. Specifically, it is our considered opinion that operational, engineering and maintenance techniques are, at this time, influenced entirely too much by fixed-wing criteria."

The industry is not against informed regulation. AIA's director of technical services, I. C. Peterson, wrote, "to insure adequate regulations so as not to require development of extensive CAA interpretative material, which in the absence of Board rules becomes mandatory for compliance by the manufacturers," AIA was submitting extensive regulatory suggestions.

As a result of cooperative effort it was agreed to avoid use of a voluntary oil-fuel ratio (a by-product of earlier regulations for regular aircraft), require a main-rotor-drive oil-pressure-warning signal, require engine and rotor rpm indicators (preferably on one instrument), etc. Minimum air speed calibration accuracies, were modified for more realistic values of five mph. down to 20 mph. and calibrated but indefinite accuracy down to 10 mph.

It was also agreed that it is too early to establish a transport category for helicopters, but a suggestion was considered that, when adopted, it might be based on a requirement for twin-engine helicopters. Other considerations made by the committees related to single-engine angle of climb (1:8), one-engine-out angle of climb (1:20) and autorotative ability extending to 3,500 feet.

Poor Industry Attendance

For a first attempt the annual review was very satisfactory. Actually, there was poor industry attendance when the importance of the meetings is considered. This can be realized by noting that, of 64 persons attending the first-day meeting, 23 were

from CAA, 15 from CAB, eight from manufacturers, three from AIA, etc. Another day 23 of the 57 in attendance were from CAA, 11 from CAB, nine represented manufacturers. During two sessions in which there were ten and eight in attendance respectively, eight and six were government.

Under the terms of CAB's original proposal, the meeting's findings will now be reviewed and serve as the basis for new regulations which will be introduced for industry comment around the first of next year.

TECHNICAL LITERATURE

LINK STUDY: University of Illinois, Urbana, Ill., has published a 44-page report on "Evaluation of the School Link and Special Methods of Instruction in a Ten Hour Private Pilot Flight-Training Program." This is the eighth in a series of bulletins on

aviation by the university's Institute of Aviation. It deals with an experiment in training students to pass the private pilot flight test after only ten hours flight time following considerable Link time. Free on request.

METALLIZING: American Welding Society, 38 West 39th St., New York 18, N. Y., has available (at 75c each) copies of their new 22-page booklet on "Recommended Practices for Metallizing."

ICAO REPORTS: The International Civil Aviation Organization with headquarters in the International Aviation Bldg., 1080 University St., Montreal, Canada, has available the Final Report of the Caribbean South American, South Atlantic Frequency Assignment Planning Meeting held in Havana in April. It is priced at 25c. Also available is the parallel report for the South East Asia Region Frequency Assignment Planning Meeting held in New Delhi in April.

FLEXIBLE TUBING: The Flexible Tubing Corp., Branford, Conn., has published a new catalog, No. 5-4, which gives complete specifications, application data, engineering tables, sizes and other descriptive matter on "Spiratube," a flexible tubing with spring-steel helical core, covered inside and out by double-seam stitched cotton duck coated with Neoprene. Typical uses include ducting for air conditioning trucks.

AIRCRAFT SEATS: Burns Aero Seat Co., 3900 Cohasset St., P. O. Box 127, Burbank, Calif., is circulating an interesting eight-page bulletin on aircraft seats. The manufacturer states that this is the first of a series on aviation seats and suggests that the rugged binder be saved for future inserts.

MOUNTING BASES: The Barry Corp., 179 Sidney St., Cambridge 39, Mass., has issued catalog No. 502 describing unit-type air-damped Barrymounts and mounting bases used to protect electronic equipment and other sensitive apparatus against vibration encountered in aircraft applications.

CONNECTORS: Joy Manufacturing Co., Henry W. Oliver Bldg., Pittsburgh, Pa., has published an eight-page two-color bulletin describing their standard line of molded Neoprene rubber electrical connectors and associated equipment such as lamp sockets, distribution centers and vulcanizers.



"Have you seen the **BIG NEWS** on Page 9?"

WHAT TIME IS DEFENSE?...



LOCKHEED F-90



Defense Is All the Time

A great airplane is more than swept-back wings and a Mach number.

It is a product of plans and planning... of vision and action... of ingenuity and skill.

It begins with America's determination to remain free. This ideal, forever foremost, requires a vigilance, forever active. It inspires our Air Force to constant research and planning. It stimulates American industry to unmatched invention. And it draws from free American labor vastly superior skills and energies.

But, above all, a great airplane is the product of time—time in research, time in planning, time in designing, developing and building. You can't put time in moth balls, nor buy it back from surplus. Today's new planes were yesterday's plans. Tomorrow's Air Force is being planned today.

Defense is a constant challenge, efficiently accepted and dynamically answered by the U. S. Air Force. The Lockheed F-90 Jet Penetration Fighter, ready for production today, is the product of planning that began more than five years ago.

LOCKHEED

Aircraft Corporation, Burbank, California
Look to Lockheed for Leadership in Jets

Extra Section

By William D. Perreault



AT PERIODIC intervals the airlines become very conscious of the number of aircraft batteries which are broken each month by careless handling.

In the first place, it's not easy to handle the average aircraft battery, and a goodly number of physical ruptures are regularly credited to lifting batteries. None-the-less, as we pondered on the cost of replacements, the task of rebuilding, etc., we thought perhaps the airlines should use the method used by Navajo Freight Lines in protecting against droppage of valuables. They claim that this series of curvaceous cuties on prominent package



OFF THE SHOULDERS

Don't toss this package off your shoulder. We like you and want you to keep on working here.

NAVAJO FREIGHT LINES

LOOK FOR THE BLUE-EYED INDIAN.



labels has been very effective in cutting down breakage costs.

When waiting for the fuel service truck to refuel a Douglas DC-6, Constellation or Stratocruiser, it sometimes seems like an endless job. We were impressed recently with the case of the Convair B-36 which carries some 21,116 gallons of fuel. This means a gross fuel weight of 126,696 pounds or about equal to the total weight of any of the present commercial airline ships. Even at the 200-gallon-per-minute refueling rates promised for future use it must be a slow process waiting while they "fill'er up."

In the eternal discussion of altitude flying and the possibilities of explosive decompression, various plans for emergency oxygen supply have been considered. In his recent paper before The Institute of the Aeronautical Sciences' CAA's George Haldeman suggested that it might be possible to flood the cabin with oxygen in such an event. Now the Bureau of Mines has published an information circular titled "Effects of the Inhalation of Oxygen" in which they note that "an excess of oxygen may be equally as harmful as too little of it." It's an interesting circular (number 7575), available on request at the U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa.

A proposed amendment to CAR Part 4b will require that manufacturers provide a degree of humidity correction as well as temperature accountability in determining the operating characteristics of their aircraft. Instead of basing performance figures on dry air, they will have to be based on humidity of not less than .4 inches of mercury vapor pressure. ICAO circular 15-AN/12 on the effects of humidity and temperature on engine power and takeoff performance indicates that specific humidity seldom exceeds 2½%. For 2½% humidity increased takeoff distance to clear a 50-foot obstacle is calculated at 17%.

OPERATIONS & MAINTENANCE



Commercial Turboprop—This Vickers Viscount, a turboprop-powered aircraft, became the first aircraft of this type to be used in commercial airline service when it was used on British European Airways' London-Paris route on July 29th. Following the first commercial flight the airplane was scheduled to be used for crew training until August 3 and then placed in regular service for 14 more days. Full-scale Viscount operation is scheduled to begin in 1952.

EAL Converting L-649's Into 749 Constellations

An extensive program to convert their Lockheed L-649 Constellations into L-749's is now under way by Eastern Air Lines at their Miami overhaul base. Effect of the changes

will be an increase in the gross take-off weight of the 649's from 94,000 pounds to 107,000 pounds. Landing weight will also be increased, going from 84,500 pounds to 89,500 pounds.

By substitution of the L-649 outer wing panels with long-range type panels, the fuel capacity of the Connies will be raised from 4,690 to 5,280 gallons, providing a major increase in aircraft range. The higher gross weights with but a few hundred pounds increase in the empty weights will make space limited inside the aircraft.

This shortcoming will be overcome by the adaptation of the Speedpak cargo pod to the converted airplanes. Eastern has nine 649 Constellations and eleven of the 749 models. Use of the 400-cu.-ft. capacity Speedpak reduces cruising speed by six to eight miles per hour or approximately 2% but provides a payload gain in this configuration of four tons.

In order to accommodate the higher gross weights EAL is modifying the fuselage structure in accordance with Lockheed Service Bulletins SB-500A and SB-503. These modifications include the reinforcement of the fuselage structure in the tail, centersection and inner wing.

Other changes being made in accordance with Lockheed Service Bulletin 545, include the installation of new brakes and flanges, new wheels, 20-ply tires and new main landing gear cylinders.

AMONG THE SUPPLIERS

Aeroquip Corp. of Jackson, Mich., has announced a \$500,000 expansion program, including a plant addition of 55,000 square feet. The company's unfilled orders are in excess of \$2,000,000 or about double compared with last year's figures. . . . **Lear, Inc.** of Grand Rapids, Mich., has appointed C. E. Willis as assistant sales manager of its

Electro-Mechanical Division, making his headquarters at the company's Los Angeles plant; and **A. N. Lawrence** has been named manager of the Teterboro, N. J. eastern office.

Scintilla-Magneto Division of Bendix Aviation Corp., Sidney, N. Y., has divided its mid-west sales area into two territories—the north mid-west headed by **W. G. (Gray) Roloson**, former company sales engineer, and the south mid-west which is under the supervision of **M. E. Douglass**. Both men will be headquartered in Milwaukee. . . . **E. Franklin Hatch**, vice president of Investors Diversified Services, Inc., New York City, was elected a director of **Solar Aircraft Co.**, San Diego, Calif., to fill the vacancy resulting from the resignation of **Jack L. Oatman**. Solar's backlog of orders has risen from \$8,903,000 on April 30, 1950 to \$24,240,000 as of August 15. . . . **SKF Industries, Inc.**, Philadelphia, Pa., has established an 11-state sales region to expedite future requirements of western industries for ball and roller bearings. The new region, with headquarters in San Francisco, will be under the direction of **J. C. Bowman**.

The Eighth Annual Meeting of the **Aviation Distributors and Manufacturers Assn.** will be held Nov. 29-Dec. 1 at the Ambassador Hotel in Los Angeles, Calif.

Harry T. Rowland, former executive vice president of **The Glenn L. Martin Co.**, has formed a new company known as **Aircraft Armaments, Inc.**, for the design, development and manufacture of all types of armament and associated



Rowland

Jacobson

equipment. Rowland is president, and **Joel M. Jacobson**, former assistant chief engineer of **Fairchild Aircraft Division** and later director of Martin's research and development activities, is vice president and general manager.

The board of directors of **Pioneer Parachute Co.**, Manchester, Conn., has elected **Lyman H. Ford** president of the company and **Henry R. Mallory** chairman of the board. Both men have been with the company since its organization in 1938.

Thomas A. Edison, Inc., Instrument Div., West Orange, N. J., has appointed **John J. Dietz** chief engineer and **Joseph A. Garratt** assistant chief engineer in charge of aeronautical products. . . . The **Industrial-Aviation Div.** of **R. M. Hollingshead Corp.**, Camden, N. J. has appointed **General Aviation Supply Co.**, St. Louis, Mo., and the **Don Horn Co.**, Memphis, Tenn., as distributors for their complete line of aviation chemical products.

Daily Plane Utilization Domestic

American	2 eng. pass. . .	5:24	5:30
	4 eng. pass. . .	7:56	8:05
	cargo	3:34	3:41
Braniff	2 eng. pass. . .	5:45	5:41
	4 eng. pass. . .	7:13	7:14
Capital	2 eng. pass. . .	7:46	7:09
	4 eng. pass. . .	8:26	8:32
	cargo	3:19	3:29
Carib.	2 eng. pass. . .	3:20	3:35
C & S	2 eng. pass. . .	9:01	9:07
	4 eng. pass. . .	8:25	7:33
Colonial	2 eng. pass. . .	4:02	5:16
	4 eng. pass. . .	7:51	6:52
Continental	2 eng. pass. . .	6:49	6:53
Delta	2 eng. pass. . .	7:09	7:05
	4 eng. pass. . .	5:47	6:04
	cargo	6:19	6:32
EAL	2 eng. pass. . .	9:48	9:31
	4 eng. pass. . .	8:36	8:37
	cargo	5:48	5:34
Hawaiian	2 eng. pass. . .	4:35	6:24
	cargo	2:02	2:18
Inland	2 eng. pass. . .	9:52	10:21
	4 eng. pass. . .	6:37	6:43
MCA	2 eng. pass. . .	7:19	5:58
NAL	2 eng. pass. . .	5:12	5:15
	4 eng. pass. . .	8:11	9:14
	cargo	:44	:58
NEA	2 eng. pass. . .	5:26	6:16
	4 eng. pass. . .	:16	2:57
NWA	2 eng. pass. . .	6:58	7:31
	4 eng. pass. . .	8:13	8:20
	cargo	4:19	5:00
Trans Pac.	2 eng. pass. . .	2:54	3:59
TWA	2 eng. pass. . .	6:55	6:57
	4 eng. pass. . .	8:25	8:05
	cargo	5:24	6:02
UAL	2 eng. pass. . .	5:15	5:19
	cargo	3:46	3:46
	4 eng. pass. . .	7:53	8:05
WAL	2 eng. pass. . .	7:10	7:18
	4 eng. pass. . .	5:07	5:35

NEW PRODUCTS

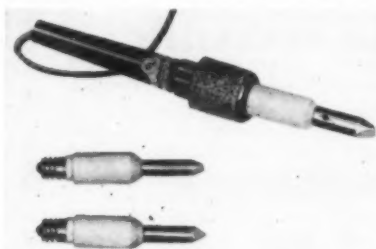
24-Hour Recorder

Amplifier Corp. of America, 396-38 Broadway, New York 13, N. Y., has developed a new tape recorder designed for continuous recording of airport plane-to-control-tower conversations, telephone monitoring, etc., on a 24-hour basis. Consisting of a rack housing two complete recording-playback systems, the Amplifier Corp's unit provides continuous recording for 12 hours at a tape speed of three inches per second using a 15-inch diameter reel with 6,000 feet of $\frac{1}{4}$ -inch tape. Reel changing on completion of a given tape is automatic. Partially completed reels can be played back without interruption of the recording process. The Magnemaster measures $8\frac{1}{2}$ " x 22" by $16\frac{1}{2}$ ". The reels extend $4\frac{1}{2}$ additional inches on either side. Net weight is about 200 pounds.



Hi-Heat Tips

Ungar Electric Tool Co., Los Angeles, Calif., has announced two new high-wattage soldering tips for industry use. Manufactured of a new material, the



"Hi-Heat" tips are pre-tinned to eliminate loss of time in cleaning and dressing. Available in pyramid tip (No. 1236) and chisel tip (1229), the Hi-Heat tips are interchangeable with the five standard 20-watt copper tips in the Ungar line.

Pressure Indicator

Control Engineering Corp., Canton, Mass., has announced three new precision pressure indicators for use in applications where combinations of high frequency, vibration or temperature would normally introduce inaccuracies. Capable of reproducing pressure fluctuations in an engine cylinder with an accuracy of 1% over the entire range of the pick-up, the CEC pressure indicators are available in models for 500 psi, 1,000; 2,000 and 3,000 psi. For static pressure measurements these ranges may be extended by 50%, according to the

manufacturer. Its characteristics make it suitable for investigating ignition phenomena, pressure-power functions, etc. For engine analysis the pressure pick-up units are used with a CEC model 2DC amplifier power supply unit which receives the output signal, amplifies and supplies a suitable signal for a standard oscilloscope for graphical presentation.

Distress Signal

Van Karner Chemical Arms Co., 202 East 44th St., New York, N. Y., has introduced a new night-time distress signal small enough to fit into the pocket of a flight jacket. The unit combines a Very Pistol and shell in a compact unit. Known as the V-1 Red Star Rocket, the new distress signal is fired simply by detaching the safety cap at



the base and pulling it sharply. It then projects a 1,000-candlepower burst of brilliant red light approximately 350 feet. It burns for seven seconds. The V-1 is contained in a round waterproof metal tube five inches long and one inch in diameter weighing about three ounces. The manufacturer states that it is CAA approved.

Electric Hoists

The Ohio Electric Mfg. Co., 5900 Maurice Ave., Cleveland 4, Ohio, is marketing a new line of heavy-duty electric cable hoists



ranging in lifting capacity from $\frac{1}{2}$ to 5 tons. Load sustaining parts of the Bob-Cat hoist, which features the motor totally enclosed within the cable drum, are made from steel forgings and castings providing a factor of safety of over 6 to 1, according to the manufacturer. Gear reduction is accomplished by means of a double internal gear train incorporating double Weston-type load brakes. The load hook oscillates and swivels on roller bearings and is suspended on $\frac{5}{16}$ -inch preformed plow steel cable replaceable without disassembling any part of the hoist. Designed for use on 220, 380, 440 or 550-volt, 3-phase, 60-cycle current. Full details on lift, capacity, speed and prices available on request.

Gearmotors

Abart Gearmotors, 4828-36 W. 16th St., Chicago 50, Ill., has introduced a new line of gearmotors of right-angle type, single-phase and three-phase



models. Standard speeds and ratios are as follows: horsepower $\frac{1}{6}$ to 5; ratios 5-4/5:1 to 100:1; output speeds from 17.5 rpm to 302 rpm. Special voltages, cycles, etc., are furnished on order. Other features include semi-steel gear case, gears of nickel bronze, worms integral with shaft hardened and precision ground, drip-proof enclosures, totally enclosed or fan cooled. Bulletin listing sizes, ratings and prices on single-phase and three-phase models will be sent on official request.

Hand Light

Mines Equipment Div., Joy Mfg. Co., Pittsburgh 22, Pa., has announced a new vapor-proof hand lamp designed for aircraft use.



Handle, socket, flange, etc., is molded as a unit of prene permanently shatter-proof Neovulcanized to 16-3 rubber-covered cord lengths. It incorporates a metal outer guard and inner shock-resistant glass globe, according to the manufacturer. Available in 60 or 75-watt styles.

Rinse Gun

Turco Products, Inc., 6135 South Central Ave., Los Angeles 1, Calif., has designed a new air and water rinse gun in which the air and water systems are controlled separately of each other. Recommended for use in rinsing after application of emulsion precleaners, degreasing solutions, paint strippers and other cleaning equipment, the new gun uses hot or cold water, connects to a regular air and water supply and has a built-in hang-up hook. The ease of controlling air and water systems separately makes the gun particularly useful in efficient adaptation to a wide variety of uses including cleaning industrial equipment, in paint spray booths, aircraft and aircraft equipment, etc.

AIR TRAVEL AT ITS FINEST...

**on the completely modern
up-to-the-minute FLAGSHIP FLEET**



THE DC-6 FLAGSHIP

First really new post-war transport, offers a new concept of passenger luxury on long distance travel.



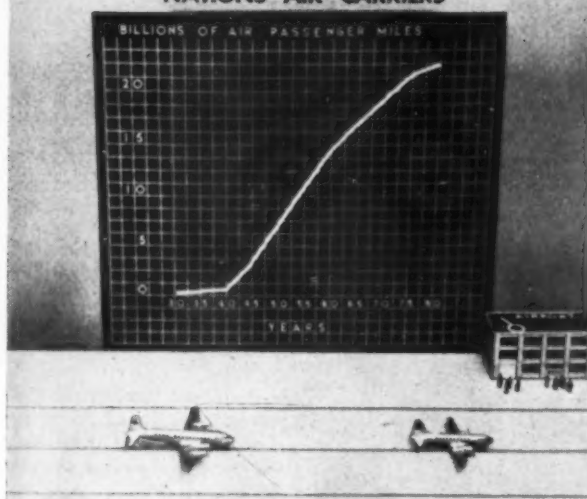
THE CONVAIR FLAGSHIP

Provides on short trips the kind of speed and comfort hitherto restricted to distant travel.

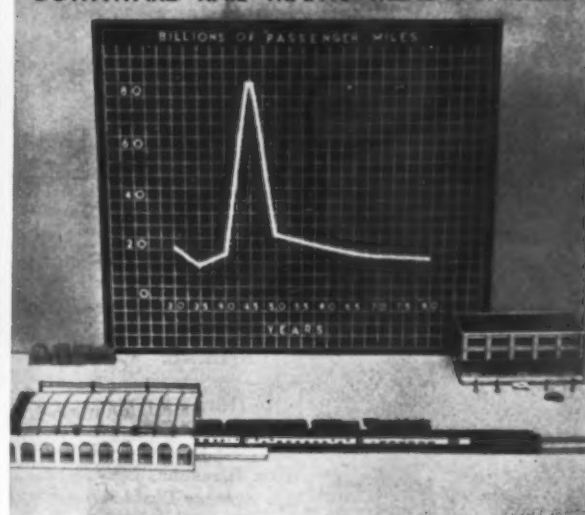
**The answer to today's demands for
bigger, better and more air transportation**

These two great aircraft form a five-mile-a-minute Flagship Fleet that is unrivalled in safety, comfort and luxury. Wherever you go . . . however long or short your journey may be . . . when you fly the route of the Flagships you are experiencing air travel at its finest.

AMERICAN AIRLINES *INC.*

UPWARD TREND PREDICTED FOR
NATION'S AIR CARRIERS

DOWNWARD RAIL TRAFFIC TREND FORESEEN



N. Y. Port Authority Forecast Predicts . . .

Air Travel to Surpass Rail by 1970

By KEITH SAUNDERS

INTERCITY common carrier travel by air will far surpass rail travel and will amount to 95% of intercity bus travel by 1980, according to an impressive study of air traffic potentials released recently by the Port of New York Authority.

In preparation for more than a year and labeled by the Authority as "the most thorough appraisal of factors influencing air traffic ever attempted," the study ("Air Traffic Forecast 1950-1980 New York-New Jersey Port District") contains conclusions and forecasts of great import and high promise to the air transport industry of this country.

It was authorized by the Commissioners of the Port Authority to guide them in the long-range planning of airport facilities in the New York-New Jersey Metropolitan District. However, it goes not only into the particular problems and potentialities of air transportation in that area but also takes a look at the future of intercity transportation in the nation as a whole, as well as competitive relationships between air transportation and surface transportation.

It gave further corroboration of the often-expressed view that the airplane probably will never become a serious competitor of the private automobile in intercity travel generally, but it tells an entirely different

story regarding common carrier travel between cities.

239% in Thirty Years

The forecasts indicate that air transportation, which in 1949 represented only 11.5% of the intercity common carrier market, will attain over 35% by 1980, by which time it will account for over 22,000,000,000 passenger-miles, compared with the 6,600,000,000 flown last year.

This 239% growth in domestic airline travel over the 30-year period from 1950 to 1980 is even more impressive when placed alongside the

estimated 42.4% decrease in rail travel, the 10.2% increase in bus travel and the 9.5% increase in total common carrier traffic. The 1949 rail traffic of 29.5 billion passenger-miles is expected to drop to 17,000,000,000 by 1980, while intercity bus traffic is expected to increase only from 21.5 billion passenger-miles to 23.7 billion.

The New York study spotlights the development of an increasingly large proportion of long-haul common carrier travel and predicts an increasing penetration of the air-rail market by the airlines as this trend continues.

In the metropolitan travel market,

Estimate of Intercity Common Carrier Travel

(Millions of Passenger Miles)

1950-1980

YEAR	Total			
	Common Carrier	Rail	Air	Bus
1949	57,600	29,500	6,600	21,500
1950	53,960	25,906	7,300	20,754
1955	53,720	22,904	11,066	19,750
1960	54,940	21,092	14,332	19,516
1965	57,120	19,843	16,707	20,570
1970	59,312	18,331	19,333	21,648
1975	61,178	17,053	21,500	22,625
1980	63,054	17,000	22,353	23,701
Per Cent Change 1980 over 1949	+9.5%	-42.4%	+238.7%	+10.2%

They all approve the Boeing Stratocruiser!



PA "We can fly upstairs with the Stratocruiser—where it's smoother, faster, but the passengers are 'downstairs.' Why—we can hold sea level cabin altitude up to 15,000 feet and even at 25,000 the cabin is only at 5400 feet."—M. KENNETH BASEHORE, flight engineer, Pan American World Airways.



AA "Most popular feature? I vote for the air conditioning system. Imagine! The air changed every 90 seconds. Filtered to take out odors—even the color of cigarette smoke—no drafts and even, steady temperatures."—NORA J. EBERS, assistant supervisor of stewardesses and pursers, American Overseas Airlines.

UA "The control cabin arrangement is the best ever. Controls and instruments are arranged for efficient use and there is plenty of room on 'the bridge' for pilot, co-pilot, navigator and engineer to perform their duties. This is indeed an air 'liner.'"—CAPTAIN H. P. LITTLE, pilot, United Air Lines.



BOAC "The comfort of the seats—full-lap illumination for reading, the quietness, freedom from vibration—seems to me every trip some passenger mentions a new feature that particularly impressed him!"—JOHN KETTLEBOROUGH, chief steward, British Overseas Airways Corporation.



NW "Passengers tell me they like its roominess—wide aisles, two decks, big dressing rooms. They can move around—don't feel 'cooped up.' And the Stratocruiser handles beautifully—stable, responsive and dependable."—NORMAN HILSEN, co-pilot, Northwest Airlines.

Airline personnel are good judges of airplanes. And on the five airlines that fly the twin-deck Stratocruiser, the great new Boeings win their enthusiastic approval. Where there is a choice, they say, more and more people want to fly the Stratocruiser ahead of any other plane.

BOEING

STRATOCRUISER

Boeing has built fleets of Stratocruisers for these forward-looking airlines: **BRITISH OVERSEAS AIRWAYS CORPORATION**
PAN AMERICAN WORLD AIRWAYS • NORTHWEST AIRLINES • AMERICAN OVERSEAS AIRLINES • UNITED AIR LINES

For the Air Force, the B-50 Superfortress, B-47 Stratojet and C-97 Stratofreighter. For the Army, the L-15 Scout liaison plane.

the report states, virtually all rail-air travel beyond 1,000 miles will be by air within 15 years, while the air penetration will reach 75% in the 500-1,000-mile bracket and 50% between 150 and 500 miles. For the country as a whole, however, the air penetration will be less than in the metropolitan market.

On the subject of air cargo, the study is less optimistic than on passenger potentials. Calling attention to the spectacular percentage increases in air freight volume in the past few years, the report said "it is not likely that air cargo will maintain its tremendous rate of growth, but continued expansion and a position in the overall transportation picture are assured."

Starting with a modest 25% increase for 1950, the study's cargo projections show that the annual rate of growth of air cargo tonnage will have slowed down to 4% by 1980. Even so, air cargo tonnage over the 30-year period is expected to increase nearly ninefold, from 169,400 tons to 1,517,500.

This growth will be stimulated, the report stated, by a decline in air cargo costs which in turn will justify rates about 25% below present levels. It is expected that the average length of haul of air cargo will remain relatively stable at about 1,000 miles.

'All-Up' Mail Service

In time, the study predicted, the country will adopt an "all-up" policy calling for first-class mail delivery by air where such delivery would be quicker than by surface transportation, and this policy will result in air mail tonnage being multiplied seven times by 1980. All first-class mail moving over 1,000 miles would go by air after 1960 and all first-class mail over 500 miles will so move by 1965, according to the forecasts.

Speaking of international traffic potentials, the report said continuing improvement in air transport services will give air transportation an increasing share of the total market, with the percentage of international passengers using air carriers out of the Port of New York to reach 50% by 1970.

Expanding Economy

Long-range forecasts have to be based on certain assumptions, and the Port Authority's study is no exception. Its authors assumed that the national economy will continue to expand during the next three decades; that there will be cyclical business fluctuations but no depression of the magnitude of that which occurred in 1930's; that the American economy will remain predominantly one of private enterprises; that in spite of

Over the Counter

Sales Promotion

CHALK UP one for C. L. "Bill" Smith, of Ruthrauff & Ryan advertising agency, for the catchy series of **American Airlines'** cartoon ads appearing in *Saturday Evening Post* and *New Yorker*.



"American Airlines, Inc., carries more passengers than any other airline in the world."

The cartoons are eye-catchers—one, for example, shows a general congratulating a private in the ranks, another a nude dancer in a night club, a third a doctor looking in a patient's ear, a fourth a dentist working on a patient. All together, we've seen 19 of them. In all cases the caption is the same: "American Airlines, Inc. carries more passengers than any other airline in the world," and the series should drive home the message. We understand that Bill worked up the idea in cooperation with C. R. Smith, American's president (and his brother, incidentally).

Capital Airlines' 1949 air coach advertising campaign has been included in the American Newspaper Publishers Association's "Blue Book", a compilation of the 50 most effective newspaper advertising campaigns of the year. Capital's campaign, prepared by Lewis Edwin Ryan Advertising, Washington, used space in over 50 newspapers and cost close to \$350,000.

National Airlines has set up an industrial information bureau to assist industrialists in relocating their plants and personnel in the southern seaboard and gulf states. The bureau will serve as a center to compile information and arrange interviews for business men in any of the 33 cities it serves . . . **Continental Air Lines** has distributed bonus awards totaling \$6,139 to employees of its Wichita, Denver, Pueblo, Colorado Springs, Albuquerque and El Paso stations for exceeding their second quarter sales quotas . . . **United Air Lines** postponed indefinitely its annual cargo contest because the usual late-summer decrease in volume has not been experienced this year.

Passenger Service

PAN AMERICAN-Grace Airways on August 14 added a "Fiesta Lounge," seating eight passengers, on its "El Interamericano" service between the U. S. and Argentina . . . **Frontier Airlines**, which has been using stewardesses on its northern division and flight agents on its southern division, changed over to stewardesses on all flights Sept. 1. It now uses about 40 stewardesses.

Traffic and Services

PAN American World Airways has added a fifth weekly round-trip tourist service between Miami and Panama to cover the peak vacation season for North Americans residing in the Canal Zone . . . First through air service between New York and the West German cities of Dusseldorf and Cologne has been inaugurated by **American Overseas Airlines**, using Constellations. Service will operate twice weekly and will augment present daily service between New York and Frankfurt.

Southern Airways expects to inaugurate service about October 1 over its two new routes, Memphis to New Orleans and Columbus to Mobile, giving first scheduled air service to Clarksdale, Greenville, Vicksburg, Natchez and Laurel, Mississippi.

Avianca, the Colombian national airline, will inaugurate the first direct non-stop service between New York and Kingston, Jamaica, on Sept. 18, operating one round-trip per week initially . . . **Pan American** is seeking CAB approval of a mid-week DC-4 tourist service between New York and Bermuda, starting Oct. 1, with a fare of \$50 one-way and \$85 round-trip. Plan would supplant summer excursion program slated to expire Sept. 30 . . . **Northwest Airlines** is set to inaugurate its daytime transcontinental coach service on Sept. 6 . . . **Robinson Airlines** has inaugurated service to Utica-Rome, N. Y., through the new Onelida County Airport.

Northwest Airlines has signed an agreement with **American Mail Line** under which freight shipments from the Far East will be put aboard NWA planes at Seattle and Portland and flown to Chicago and New York/Newark, using a combination of ship and air rates . . . **United Air Lines** and **Pan American World Airways** have signed a joint-fare agreement whereby UAL passengers will connect at New York with PAA's "El Presidente" Stratocruiser flight to Rio, Montevideo and Buenos Aires, with stop-over privileges in New York.

1st Anniversary Delta-American
Through DC-6 Service to
California



Just a year ago, September 25th, 1949, Delta and American Airlines inaugurated through DC-6 service between Southern cities and California. American crews fly Delta planes west of Dallas and Delta crews take over American DC-6's east of Dallas.

Delta's first through-plane service was instituted between Cincinnati and Detroit in June 1948 in conjunction with TWA. This and the California service are the only two operations of this type in U. S. today.

Municipal Airport, Atlanta, Ga.

From:
MIAMI
JACKSONVILLE
ATLANTA
BIRMINGHAM
NEW ORLEANS



TRAFFIC & SALES



Hawaiian Airlift—Shown here is a part of the largest commercial airlift in Hawaii's history, the transportation by air of 800 tons of pineapple crowns from the Island of Maui to Upolu Point Airport on the Island of Hawaii. Operation is being flown by Hawaiian Airlines for the Kohala Sugar Co., which is transplanting approximately 3,500,000 of the crowns to a new 250-acre field on Hawaii. Hawaiian's planes will make 220 flights over an eight-week period to complete the airlift.

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political forces restricting free interchange of goods and people, the dominant role of the U. S. in world affairs will result in an expanding volume of international trade and travel; and that commercial air transport will continue to benefit to some extent from government expenditures and other cooperative efforts in the field of aviation.

Overall direction of the study was vested in Alex L. Hart, chief of the Authority's airport planning bureau, and Grahame H. Aldrich. Retained as special consultants were Dr. Lewis C. Sorrell, director of research for the Air Transport Association; Joseph D. McGoldrick, former comptroller of the City of New York and author of a well known airport study; and Wilfred Owen, co-author of an authoritative book on air transportation.

CAB BRIEFS

Route Actions

The Civil Aeronautics Board has officially postponed further procedural steps in three west coast feeder cases pending decision by the U. S. Court of Appeals for the Ninth Circuit in San Francisco on Western Air Lines' petition for a restraining order. The West Coast-Southwest Merger Case and the Southwest and West Coast Renewal Cases will

be set for hearing approximately one week after the court's decision, unless the restraining order is issued.

The Board awarded two additional routes in several southern states to **Southern Airways**, in the reopened Mississippi Valley and Southeastern States cases. One route is between Memphis and New Orleans via Clarksdale, Greenville, Vicksburg, Jackson, Natchez, Miss., and Baton Rouge, La.; the other is between Columbus, Miss., and Mobile, Ala., via Jackson, Laurel and Hattiesburg, Miss.

Trans World Airlines has asked CAB for authority to suspend international service to and from Chicago and Detroit for a seven-month period beginning Nov. 1 because of low load factors experienced during previous winter seasons.

Capital Airlines was granted an exemption permitting operation of non-stop C-54 all-cargo flights between New York and Detroit and one-stop flights between New York and Chicago, so as to permit expanded utilization of the line's one remaining C-54 cargo plane. Exemption is valid for 60 days.

An application for an exemption permitting unlimited cargo operations between Tampa, St. Petersburg and Guatemala City via Havana and Belize has been filed with the Board by **Aerovia Sud Americana**, of St. Petersburg. Exemption would be valid until its application for a certificate in the Latin American Air Freight Case has been acted on.

The Board denied **American Air Transport's** application for an individual large irregular air carrier exemption on the ground that it has operated "route-type" services to and from San Juan in violation of the Act and the

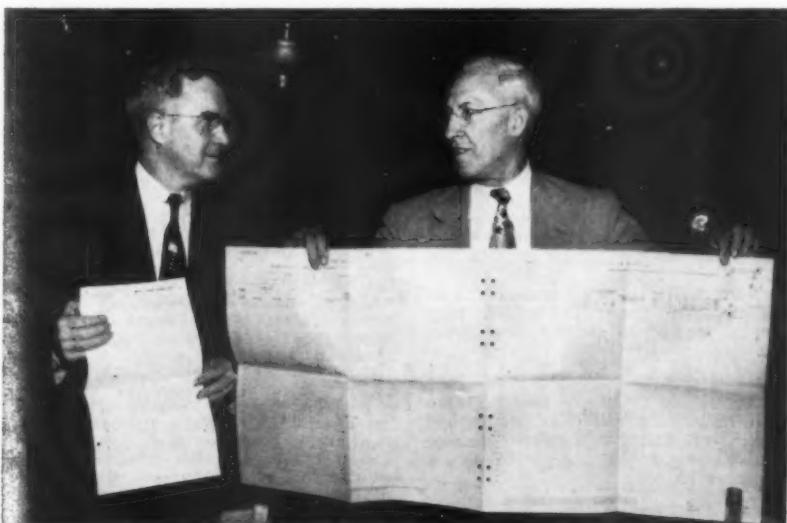


"Have you seen the **BIG NEWS** on Page 9?"

economic regulations. A two-year exemption was granted to **Quaker City Airways** of Philadelphia.

CAB Examiner Walter W. Bryan has recommended approval of **American Airlines'** request for a permanent authorization to serve Los Angeles and San Francisco on all-cargo flights, now stopping at both cities under a temporary exemption. The authorization would not apply to passenger operations.

Application of **Mt. McKinley Airways** for an individual exemption to operate as a large irregular air carrier was denied because, the Board said, the carrier by its past actions "has demonstrated such a disregard for compliance



Shrinking Red Tape— The two documents above illustrate how much travel restrictions have been eliminated in the program to expedite foreign movements. Ernest E. Salisbury, operations adviser to U. S. Commissioner of Immigration and Naturalization, (right) holds 37-column manifest for aliens arriving in U. S., which had to be filled out in days before air transportation. Robert Ramspeck, executive v.p. of Air Transport Association, holds new 4-column form now used.

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in BIRMINGHAM

The Tutwiler

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in NEW ORLEANS

The St. Charles

J. J. (Mike) O'Leary,

Vice Pres. & Mgr.

in NASHVILLE

The Andrew Jackson

Leon Womble, Manager

in MONTGOMERY

The Jefferson Davis

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TRAFFIC & SALES

with the Board's regulations . . . " McKinley's letter of registration was revoked on May 18 for "knowing and wilful violation of the Civil Aeronautics Act."

Mail Rates

Wiggins Airways accepted the new mail rate which for the period beginning August 1, 1950, will return it approximately \$309,000 annually, compared with an estimated yield of \$212,000 under the previous rate.

CAB has directed Bonanza Air Lines to show cause why it should not accept an increase from 50c to 55c per plane-mile for the period July 1, 1950, through December 31, 1950, and a 50¢ rate on and after Jan. 1, 1951. Annual mail pay to the line under the proposal is estimated at approximately \$484,000.

The CAB has proposed to cut Northwest Airlines' trans-Pacific mail pay by approximately \$1,335,000 annually, stating that there are indications the carrier has been receiving an excessive rate of return. New rate, to which the airline has filed objections, would return NWA approximately 88¢ per plane-mile for the period beginning August 1, 1950. Present temporary rate is \$1.00 per plane-mile for the Pacific routes.

Northwest Airlines has been authorized by the Board to operate transcontinental air coach flight "at any hour of the day," subject to a fare increase from 4c to 4½c per passenger mile.

Fares—Tariffs

A joint tariff has been filed with the CAB asking it to extend the expiration date of Eastern Air Lines' air coach services for one year and to extend other domestic coach operations, which are to expire September 30, for three months. The application covers all domestic coach services except those of United, the transcontinental operations of American and TWA, and the Los Angeles-San Francisco services of Western.

Eastern Air Lines has asked the Board to make it a party to the investigation of west coast common fares which has been tentatively assigned for hearing on Dec. 11. EAL was not named in the Board's investigation order but said it has a direct and vital interest in the case because the policies and principles evolving from the investigation may later be applied to similar fare situations.

Colonial Airlines has applied for continuance of its \$85 round-trip fare between New York and Washington and Bermuda to March, 1951. Tariff became effective May 1 and is due to expire September 30.

Island Air Ferries, which was certificated two years ago to fly passengers and property in the Long Island Sound area and has never operated under the certificate, has asked the Civil Aeronautics Board to reverse its decision denying the carrier the right to transport mail and has applied for a 60c-a-plane-mile mail rate.

CAB CALENDAR

Sept. 7—(Docket 3854) Prehearing conference in Modern Air Transport Large Irregular Carrier Exemption Case. 10 a. m., Room E-214, Temp. Building 5, Washington, D. C.

Sept. 11—(Docket 4207) Hearing in Arrow Airways-California Arrow Interlocking Relationships Case. (Enforcement Proceeding.) Tentative. Examiner Walter W. Bryan.

Sept. 11—(Dockets 3289 and 3299) Oral agreement before the Board in Service to Lumberton, N. C. Case. 10 a. m., Room 5042, Commerce Building, Washington, D. C.

Sept. 11—(Docket 4387 et al.) Prehearing conference in Wisconsin Central Airlines, Certificate Renewal Case. 10 a. m., Room E-214, Temp. Bldg. 5, Washington, D. C. Examiner Warren E. Baker. Postponed from Aug. 28.

Sept. 11—(Docket 4508) Hearing in Pan American World Airways Fairbanks-Seattle Space Available Fare Investigation. Tentative. Examiner F. Merritt Ruhlen.

Sept. 11—(Docket 4161) Hearing resumed in Trans American Airways, et al. Enforcement Proceeding. 10 a. m., Room 1011, Temp. Bldg. 5, Washington, D. C. Examiner Barron Fredricks.

Sept. 12—(Docket 3851) Prehearing conference in TWA Albuquerque-Santa Fe Restrictions Case. 10 a. m., Room 1011, Temp. Building 5, Washington, D. C.

Sept. 14—(Docket 4100) Oral argument before the Board in Meteor Air Transport Revocation Proceeding. 10 a. m., Room 5042, Commerce Building, Washington, D. C.

Sept. 18—(Docket 4228 et al.) Hearing in Philadelphia Service Suspension Case (International Routes). Tentative. Examiner Herbert K. Bryan.

Sept. 18—(Docket 2832 et al.) Oral argument before the Board in Michigan-Wisconsin Service Case. 10 a. m., Room 5042, Commerce Building, Washington, D. C.

Sept. 19—(Docket 3393) Prehearing conference in Mason City, Iowa Service Case. 10 a. m., Room E-214, Temp. Building 5, Washington, D. C. Examiner R. Vernon Radcliffe.

Sept. 20—(Docket 4545) Prehearing conference in Texas-California Interchange Case (Trans World Airlines and Continental Airlines). 10 a. m., Room E-214 Temp. Bldg. 5, Washington, D. C. Examiner William F. Cusick.

Sept. 21—(Docket 2949) Prehearing conference on Mid-Continent Airlines' application to serve Lincoln, Nebraska on Omaha-St. Joseph segment. 10 a. m., Room 5040, Commerce Building, Washington, D. C. Examiner Curtis C. Henderson.

Sept. 21—(Docket 1666) Prehearing conference in American Overseas Airlines Mail Rate Case. 10 a. m., Room E-214, Temp. Bldg. 5, Washington, D. C.

Sept. 25—(Dockets 4443 and 4480) Hearing in Pan American World Airways, et al. Tour Basing Fare Investigation. Tentative. Examiner F. Merritt Ruhlen.

Sept. 25—(Docket 3213 et al.) Hearing on applications for Havana-New York Foreign Air Carrier Permits. Tentative. Examiner J. Earl Cox. Postponed from September 11 tentative date.

Sept. 26—(Docket 3693) Hearing on application of Mid-Continent Airlines for permanent Tulsa-Houston certificate. Tentative. Examiner Walter W. Bryan.

Oct. 2—(Docket 4340) Hearing in Frontier Airlines Certificate Renewal-United Air Lines Suspension Case. Tentative. Postponed from September 18 tentative date. Examiner Herbert K. Bryan.

Oct. 9—(Docket 2888 et al.) Hearing in Latin American Air Freight Case. (Skytrain Airways, et al.) Tentative. Examiner Paul N. Pfeiffer.

AIRLINE PEOPLE

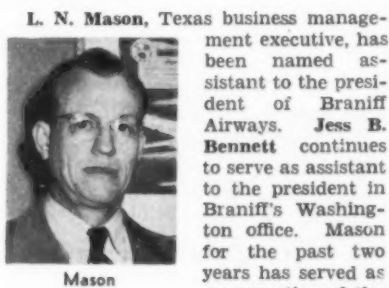
ADMINISTRATIVE



Long

William F. Long, chairman of the board of Pioneer Air Lines, has taken over active management of the airline as principal executive officer during the absence of **Robert J. Smith**, president, who has been sworn in as vice chairman of the National Security Resources Board.

Harry R. Playford, president of U. S. Airlines since its organization in 1945, has resigned his position because of the pressure of other interests but will remain as a director. **George M. McCleary**, associated with the company as a director for the past three years, is the new president.



Mason

L. N. Mason, Texas business management executive, has been named assistant to the president of Braniff Airways. **Jess B. Bennett** continues to serve as assistant to the president in Braniff's Washington office. Mason for the past two years has served as an executive of the Farm Bureau Insurance Co. of Columbus, O. During the late war he was in charge of planning and research at Consolidated Vultee Aircraft Corp.'s Fort Worth plant.

Eugene A. Raven, assistant director of advertising for United Air Lines since 1944, has been named manager of advertising. He assumes the former duties of **Robert E. Johnson**, recently promoted to director of public relations and advertising.

W. R. "Ike" Lynn has been promoted from district sales manager for The Flying Tiger Line at Detroit to administrative assistant to **George T. Cussen**, vice president. Before joining the Tigers two years ago, Lynn had served in various traffic and sales jobs with Mid-Continent Airlines, Braniff Airways and Alaska Airlines.

OPERATIONS-MAINTENANCE

Fred S. Angstadt has been promoted from assistant flight manager of United Air Lines' western division to flight manager of the line's Pacific division.

Kenneth E. Callender, airport engineer for Pan American World Airways' Latin American Division, has been loaned to

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Serving the Nation in Aviation

Airline Commentary

By Eric Bramley



the Puerto Rican government as a consultant on construction of the new Isla Verde Airport near San Juan.

TRAFFIC & SALES

Dean J. Hanscom has resigned as western regional sales manager for Northwest Airlines, effective September 15. He will enter private business after 37 years in steamship and air transportation.

C. W. (Bill) Doolittle has been named assistant to **W. R. Beattie**, agency and interline sales manager of Braniff Airways. He has an extensive background in travel agency and tour work and will be in charge of Braniff's air tour program.

Stanton B. Danilow, director of public relations for Trans-Texas Airways and prior to that general traffic and sales manager, has resigned his position. He has not announced his future plans.

Don Kiernan has been promoted from supervisor of reservations and ticket offices for Scandinavian Airlines System in New York to the position of assistant to **Harold Gyllensward**, general traffic manager. **Art Yule** of the reservations department has taken over Kiernan's former job.

Robert F. Fitzsimmons, formerly an executive of the Twin City Rapid Transit Company of Minneapolis/St. Paul, has been appointed to the newly created position of Twin Cities sales manager for Northwest Airlines. He will take over his new duties in September.



Fitzsimmons

Charles F. Fisher, formerly regional agent and interline manager in Seattle for Western Air Lines, has been named district traffic manager there, succeeding **Robert Smith**. The latter has been assigned to WAL's general office in Los Angeles.

William J. Mitchell has been promoted from district sales representative for All American Airways in Washington to regional sales manager at Pittsburgh.

James J. Fauteux, until recently California sales manager for Northwest Airlines, has been transferred to Cleveland as district sales manager, succeeding **A. Donald Ewald**, resigned. **Frank E. Coufal**, formerly sales manager in Vancouver, B. C., succeeds Fauteux at San Francisco; **William J. Kenney**, formerly district sales manager in Great Falls, has been assigned to Vancouver; and **Robert J. Westberg**, sales representative in Spokane, has been promoted to district sales manager in Great Falls.

Herbert A. White has been promoted from transportation agent to district traffic and sales manager for Pioneer Air Lines in the Houston area.

YOU MAY RECALL that we were wondering, in a previous column, why Seaboard Air Line Railroad Co. has the words "air line" in its name. We thought, and still think, that they're misleading. We queried the company and received a prompt answer from **W. E. Rachels**, public relations representative. "It so happens," he says, "that the words 'air line' had been identified with Seaboard routes for almost a half century before the Wrights made their first flight at Kitty Hawk. As you may have surmised, the term 'air line' was employed for its connotation of the directness of our routes." He enclosed a history of the origin of the name, which is too lengthy to print here. It shows that, among all the predecessor companies, the "air line" phrase first appeared on Dec. 13, 1871, when the name of the Chatham Railroad Co. was changed to the Raleigh and Augusta Air Line Railroad Co. After a lot of other name changes, the present corporate title, Seaboard Air Line Railroad Co., was adopted on Sept. 20, 1945. That would have been an excellent time to drop the "air line." With all the air service in the U. S., we doubt whether anyone in this day and age connects "air line" in a railroad name with the most direct route between two points. So even though they were used pre-Kitty Hawk, we think the words should be dropped.

Many people in the airline business knew and liked Vince Conroy, former vice president-traffic and sales for TWA, and will be glad to know that he is doing very well for himself and family in the automobile business. He's with Harris Motors, 21st and Granby, Norfolk, Va., a firm in which Sam Solomon (of the airline business) is a partner.

Joe Ferris, Northwest Airlines' publicity director, sends us the following amusing yarn: NWA had distributed a questionnaire among its New York passengers, asking the following questions: "Would you have taken this same flight if it were scheduled to and from LaGuardia instead of Idlewild?" and "Which airport do you prefer in flying to and from New York?" Two of the completed questionnaires arrived at NWA headquarters with a notation by the stewardess that there had been a request that they be submitted together. The reply on the first card read: "Yes, I would have taken this flight out. Really, now, who cares about the location of an airport? It really doesn't make any difference as long as a fellow can get on a plane and fly away." The reply from the passenger whose card was clipped to the first read: "The man opposite me who said it really doesn't make any difference doesn't have to concern himself with convenience or the lack of it. I'm taking him to a Minnesota institution to finish a 20-year sentence."

We've always been interested in reading, in some airline company publications, the letters, complimentary and otherwise, that are received from passengers. As a matter of fact, we think more airlines should print such letters as a means of letting all personnel know what passengers are griping about and what they like. Anyway, we've been interested to note that Trans-Canada Air Lines is also running a box score on its "what others think of us" page. The year to date shows 345 complaints received against 322 commendations. This doesn't mean that TCA's dissatisfied customers are in the majority, because people will write when they're unhappy, while the satisfied passengers take the good service for granted and don't bother to tell anyone about it. The box score is a feature which TCA personnel undoubtedly follow with interest, and the company is to be commended for putting it out there for all to see.

They may be flying those little old nine-passenger Lockheed Electras, but Wisconsin Central Airlines' pilots are a bunch of gents who are very loyal to their company and who want the passengers to think that they're getting nothing but the best. The latest trick: after landing at an airport, some of the pilots gun the engines and then tramp on the brakes. The purpose: to make the passengers think that the Electras have reversible propellers.

U. S. Domestic Airline Traffic for June, 1950

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MAILES **	EXPRESS TON-MAILES	FREIGHT TON-MAILES	TOTAL TON-MAILES	REF. TRAFFIC	AVAILABLE TON-MAILES FLOWN	% AVAILABLE TON-MAILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	351,084	177,330,000	229,346,000	77.32	744,108	579,996	2,915,985	21,217,109	30,096,867	70.50	5,254,488	5,072,432	99.64	
Boeing	57,643	19,517,000	33,102,000	58.96	104,647	74,085	208,292	2,297,055	4,298,188	52.51	939,556	927,807	99.89	
Capital	135,297	41,182,000	66,372,000	62.05	121,041	190,989	816,505	5,074,279	9,035,570	56.16	1,815,236	1,756,700	99.37	
Continental	5,796	453,000	1,128,000	41.31	731	2,072	39,260	117,040	117,040	33.54	45,347	45,100	99.91	
C & S	28,709	10,345,000	17,763,000	58.29	43,285	55,130	70,278	1,161,149	2,069,798	56.11	643,825	637,846	99.69	
Colonial	18,983	4,839,000	9,731,000	49.73	7,391	7,753	9,283	499,863	1,140,816	43.82	324,149	325,562	99.45	
Continental	19,626	7,021,000	14,035,000	50.02	15,298	8,673	43,105	740,142	1,457,854	50.77	492,735	487,875	99.96	
Delta	53,328	22,013,000	37,490,000	58.71	88,776	81,299	242,832	2,529,965	4,997,691	51.03	1,155,072	1,137,246	99.95	
Eastern	223,849	102,978,000	159,786,000	64.45	381,914	235,184	1,167,161	12,204,418	23,057,473	52.93	4,400,630	4,283,919	99.88	
Northwest	35,622	5,213,000	7,058,000	73.86	4,874	9,398	40,165	486,386	754,723	64.45	314,621	209,297	98.69	
Inland*	9,249	3,796,000	6,894,000	55.06	11,496	6,681	16,215	399,004	806,555	49.47	288,828	292,200	96.77	
NCA	34,121	10,112,000	18,530,000	54.57	27,773	20,942	52,572	1,071,101	2,019,773	53.03	739,832	720,000	99.72	
National	29,473	17,768,000	36,254,000	49.01	40,443	53,521	163,609	2,062,971	4,863,447	42.42	889,915	874,320	98.93	
Northwest	36,316	6,971,000	13,803,000	50.50	8,862	16,184	32,935	688,355	1,390,250	49.51	406,322	421,656	93.86	
Southwest	92,756	62,570,000	90,086,000	69.46	185,344	165,070	561,330	6,906,476	11,559,841	59.75	1,912,912	1,681,312	99.34	
Trans Pac.	14,571	2,216,000	3,319,000	66.76	2,222	82	164,849	164,849	256,532	64.26	118,552	63,362	100.00	
TWA	156,443	115,979,000	147,866,000	78.43	689,232	496,891	1,040,279	13,261,836	19,179,233	69.67	3,992,228	3,939,531	99.35	
United	252,130	145,922,000	183,678,000	79.44	960,079	650,271	2,280,468	17,878,356	28,078,814	63.67	4,716,643	4,553,530	99.80	
Western*	47,875	18,489,000	30,287,000	61.05	68,775	48,741	58,439	1,942,791	3,280,829	59.22	768,181	756,168	99.04	
TOTALS	1,602,791	774,712,000	1,106,510,000	70.01	3,504,049	2,700,890	9,722,793	90,685,365	148,420,894	61.10	29,219,072	28,186,163	99.51	
* Operations of Western and its subsidiary, Inland, should be considered as consolidated, although reports are filed separately as shown here.														
** Includes air parcel mail.														

* Operations of Western and its subsidiary, Inland, should be considered as consolidated, although reports are filed separately as shown here.
** Includes air parcel post.

U. S. International Airline Traffic for June, 1950

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	U. S. MAIL TON-MAILES	FOREIGN MAIL TON-MAILES	EXPRESS TON-MAILES	FREIGHT TON-MAILES	TOTAL TON-MAILES	REV. TRAFFIC TON-MAILES	AVAILABLE TON-MAILES	% AVAILABLE TON-MAILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	7,558	5,482,000	9,495,000	57.74	9,542	2,552	935	102,620	696,725	1,242,077	56.09	186,148	175,740	99.74	
Amer. Overseas	14,709	24,583,000	36,251,000	67.81	165,015	50,036	257,451	3,135,870	4,875,086	64.32	710,376	746,835	92.37		
Boeing	1,841	3,832,000	10,968,000	34.94	3,982	1,201	.....	132,418	510,288	1,551,585	32.89	256,034	256,034	100.00
C & S	2,061	2,412,000	5,431,000	44.41	2,426	362	.....	53,011	305,203	644,071	47.39	139,234	142,469	95.33
Colonial	2,800	2,299,000	3,397,000	67.68	476	520	.....	249,101	409,119	60.89	65,459	53,374	100.00	
Eastern	2,972	6,034,000	8,715,000	69.24	7,981	.....	.....	24,923	652,350	1,002,914	65.05	153,377	62,400	100.00
National	6,562	1,783,000	3,566,000	50.00	856	.....	18,560	.....	201,056	460,226	43.69	64,055	62,880	98.13
Northwest	6,298	11,786,000	18,701,000	63.02	157,839	21,541	17,814	518,904	1,980,502	2,960,180	66.90	596,610	473,631	99.32	
Panagra	7,521	8,139,000	18,049,000	45.09	29,439	17,571	105,754	.....	1,053,389	2,411,532	43.68	469,693	478,310	97.34
PAA	60,273	61,504,000	89,459,000	69.35	223,906	61,792	1595,995	52,370	7,941,932	14,319,394	55.46	2,599,617	1,998,235	98.72	
Latin Amer.	14,805	33,967,000	46,975,000	72.31	277,386	69,477	735,608	.....	4,773,784	7,123,083	67.02	1,152,942	1,134,640	96.99
Atlantic	7,601	22,916,000	37,447,000	61.20	466,578	58,114	400,701	.....	3,218,049	5,502,232	58.49	827,164	763,702	99.55
Pacific	4,927	5,405,000	8,618,000	62.72	33,571	.....	382,573	2,764	981,012	1,883,700	52.06	274,773	209,995	100.00
Alaska	13,090	37,096,000	60,197,000	61.62	249,785	110,693	.....	465,072	4,887,183	8,160,484	59.89	1,445,240	1,445,221	98.06
United	3,324	7,977,000	9,360,000	85.22	50,608	.....	.....	23,594	910,080	1,211,500	75.12	175,200	165,600	100.00
TOTALS	156,342	235,215,000	366,629,000	64.15	1,679,390	393,899	3,515,391	1,381,222	31,496,524	53,757,183	58.58	9,055,922	8,169,066	97.88	
* includes air parcel post.															
NOTE: Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for Boeing to South America; C & S to South America; Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient and Honolulu, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedure.															

* Includes air parcel post.

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U. S. Feeder Airline Traffic for June, 1950

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MAILES	EXPRESS TON-MAILES	FREIGHT TON-MAILES	TOTAL TON-MAILES	REVENUE TRAFFIC	AVAILABLE TON-MAILES	% AVAILABLE TON-MAILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
All American	15,958	2,267,000	6,071,000	37.34	3,700	9,688	• • •	235,474	693,931	33.93	289,138	291,492	96.51	
Boeing	1,696	428,000	1,549,000	27.63	394	242	935	39,201	151,755	25.83	76,822	76,680	99.98	
Capital	1,132	128,000	470,000	27.23	1,304	• • •	• • •	13,608	45,247	30.07	156,564	156,480	99.94	
Empire	3,972	799,000	2,063,000	38.73	1,580	1,533	• • •	77,581	203,636	38.10	98,280	94,858	99.59	
Frontier*	**	1,826,000	5,817,000	31.39	5,992	4,470	14,652	208,454	647,489	32.19	323,163	323,080	99.61	
Mid-West	839	124,000	557,000	22.08	1,911	• • •	• • •	11,845	61,276	19.33	139,265	140,440	93.82	
Piedmont	12,726	2,965,000	6,963,000	37.12	4,602	6,919	16,339	275,307	795,684	34.60	332,667	331,308	99.90	
Pioneer	11,115	3,030,000	7,391,000	41.90	7,602	4,320	14,630	330,649	738,815	44.75	307,860	308,025	99.78	
Reisen	5,327	856,000	1,947,000	43.97	1,904	3,026	2,984	81,022	217,964	77.17	99,667	96,512	97.92	
Southern	3,214	518,000	3,030,000	17.10	3,172	3,836	• • •	56,573	273,671	20.67	144,265	144,300	99.98	
Southwest	11,440	2,146,000	4,215,000	50.91	4,075	5,077	10,882	235,114	421,744	55.80	200,735	199,530	99.68	
Trans-Texas	5,686	1,256,000	5,184,000	24.23	4,406	2,741	4,908	138,063	518,435	26.63	246,074	246,180	100.00	
Tuam	1,411	261,000	1,143,000	22.83	377	1,934	192	26,334	114,382	23.02	81,038	77,280	97.08	
West Coast	7,313	1,054,000	2,485,000	42.44	551	1,187	2,018	98,415	259,547	37.92	118,252	119,442	98.60	
Virginia	300	25,000	138,000	18.12	188	• • •	• • •	2,493	13,841	18.01	35,282	36,757	93.63	
W. Central	4,968	810,000	1,506,000	53.78	3,519	4,521	• • •	84,564	157,529	53.68	177,973	179,580	98.93	
TOTALS	87,097	18,113,000	50,529,000	35.94	45,277	49,494	66,940	1,914,897	5,315,033	36.01	2,827,825	2,830,744	98.97	
					Helicopter Mail Service									
Los Angeles	• • •	• • •	• • •	• • •	1,858	• • •	• • •	1,858	4,704	39.49	29,860	30,291	98.57	
	• • •	• • •	• • •	• • •	3,727	• • •	• • •	3,727	11,883	31.36	30,626	31,064	98.59	
* Formerly Challenger Airlines and Monarch Air Lines. Companies have merged and are now operating under name of Frontier Airlines, Inc.														
** Figure not yet available. Data will be reported at a later date.														

* Formerly Challenger Airlines and Monarch Air Lines. Companies have merged and are now operating under name of Frontier Airlines, Inc.
** Figure not yet available. Data will be reported at a later date.

U. S. International Airline Revenues & Expenses for May, 1950

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	U. S. MAIL REVENUES	FOREIGN MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	\$ 297,986	\$ 245,154	\$ 7,370	\$ 4,578	\$ 365	\$ 22,738	\$ 3,593	\$ 2,952	\$ 302,499	\$ 168,135	\$ 134,363	\$ -4,512
Amer. O'Shea	2,036,497	1,449,428	342,585	96,830	107,197	...	14,866	16,880	2,210,471	1,216,766	993,705	-171,974
Brantiff	408,455	241,218	141,368	2,826	...	14,924	6,035	...	429,427	180,261	249,166	-20,972
C & S	296,722	148,826	128,045	799	...	13,930	4,621	...	331,836	161,157	170,679	-35,114
Colonial	120,585	88,262	26,662	1,327	...	2,143	243	...	127,034	46,724	80,310	-6,450
Eastern	71,123	58,785	5,301	...	...	6,611	425	...	67,738	31,511	36,227	3,265
National	109,725	94,641	5,952	...	7,414	...	1,717	...	120,532	39,858	80,674	-10,807
Northwest	1,250,458	563,572	466,790	27,781	4,260	153,775	5,463	22,964	994,921	505,294	489,525	255,537
Panagra	1,277,132	795,564	318,438	47,715	56,371	...	23,562	9,485	1,170,516	535,900	634,616	106,616
TAA	4,808,439	2,890,943	957,762*	164,664	599,961	...	68,386	36,126	4,540,911	1,890,981	2,649,930	267,528
Latin Amer.	3,892,455	2,327,330	1,064,374*	171,270	257,157	...	47,806	16,277	3,457,055	1,566,231	1,890,824	435,400
Atlantic	2,672,364	1,333,365	997,915*	109,803	147,463	...	11,065	53,171	2,376,422	1,064,862	1,311,560	295,942
Pacific	400,122	231,595	58,309*	...	88,008	...	1,283	21,021	373,520	172,805	201,115	26,203
Alaska	3,489,711	2,202,018	775,049	232,838	...	195,424	44,265	14,274	2,967,646	1,569,638	1,398,008	522,064
TWA	360,884	296,720	37,781	...	...	11,311	1,811	...	532,871	335,800	197,071	-171,987
United	21,494,660	12,975,421	5,333,721	860,431	1,368,196	420,856	235,241	197,150	20,003,799	9,486,026	10,517,773	1,460,899
TOTALS												

* Represents company's estimate of amount which should be received in accordance with the terms of the Civil Aeronautics Act when permanent rates are established. Estimate exceeds temporary rates in effect by:
 Latin American Div. \$355,512; Atlantic Div. \$255,783; Pacific Div. \$17,515; Alaska Div. \$-53,266

NOTE: Data in above tabulations were compiled by American Aviation Publications from reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for Brantiff to South America; C & S to South America; Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient and Honolulu, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

U. S. Feeder Airline Revenues & Expenses for May, 1950

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
All American	\$ 253,582	\$ 119,830	\$ 127,623	\$ 4,719	\$...	\$ 548	\$...	\$ 280,028	\$ 141,448	\$ 138,580	\$ -26,646
Bonanza	68,861	21,451	46,503	-30	257	152	527	63,117	28,858	34,279	5,764
Central	61,194	5,674	53,411	...	...	158	158	58,960	23,440	35,520	2,234
Challenger	91,991	26,291	63,388	492	1,374	139	...	107,057	49,632	57,425	-15,066
Empire	82,843	29,539	52,164	244	...	187	934	79,345	40,292	39,053	3,498
Mid-West	46,076	4,056	44,967	...	...	38	...	53,361	28,705	24,656	-4,285
Monarch	147,513	39,292	107,648	802	3,061	154	144	150,992	69,259	81,733	-3,479
Piedmont	265,822	130,125	129,243	2,052	3,333	1,115	...	244,317	138,820	105,497	21,505
Pioneer	289,892	156,941	124,936	1,780	3,865	1,071	...	269,311	133,396	135,915	20,582
Robinson	93,833	53,874	37,570	1,279	770	134	120	98,407	50,671	47,736	-4,574
Southern	119,974	29,193	89,049	1,146	...	148	...	134,432	70,713	63,719	-14,458
Southwest	193,536	98,115	81,334	1,773	5,093	494	2,311	160,855	72,544	88,314	32,681
Trans-Texas	210,326	56,326	151,291	836	1,631	220	...	187,764	87,021	100,743	22,562
Turner	58,810	10,633	40,018	763	...	98	7,298	56,045	29,789	26,256	2,765
West Coast	121,518	57,220	62,222	948	...	111	556	109,601	53,697	55,904	11,916
Wiggins	17,264	1,132	16,075	...	...	2	55	18,511	8,518	9,993	-1,247
Wis. Central	141,785	36,661	102,931	1,669	...	172	...	140,518	73,309	67,209	1,287
TOTALS	2,267,640	876,353	1,326,373	18,473	19,384	4,836	12,103	2,212,621	1,100,089	1,112,532	55,019
Hel. Air Serv.	31,644	...	31,644	...	...	...	...	29,614	15,672	13,942	2,031
Los Angeles	38,002	...	38,002	...	...	...	...	37,742	24,297	13,445	261

NOTE: Figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

1949 Airline Salaries Reported to CAB

The following salaries, stockholdings, and remunerations have been reported by the airlines to the Civil Aeronautics Board for calendar 1949.

Slick Airways, Inc.

Earl F. Slick, pres. & dir., no salary, 10,152 shares common, and \$55,000 4% convertible income debentures; Lewis J. Moorman, Jr., dir. and exec. v. p., no salary, and one share common; Thomas L. Grace, v. p. oper., \$9,150 salary, and \$4,000 4% debentures; Joseph F. Grant, sec'y, \$8,820 salary, one share common, and \$2,000 4% debentures; David R. Stewart, treas., \$8,497.50 salary, and \$2,000 4% debentures; William E. Miller, ass't sec'y, no salary, and no

stock; Tom B. Slick, dir., no salary, and 50,000 shares common; C. F. Urschel, dir., no salary, and 2,500 shares common; Charles F. Urschel, Jr., dir., no salary, and 10,001 shares common; W. Bankart Langmore, dir., no salary, and one share common; Samuel R. Milbank, dir., no salary, 1,500 shares common, and \$14,000 4% debentures; B. Allison Gillies, dir., no salary, and no shares.

Steeptoe and Johnson, Washington, D. C., legal services, 1949.. \$60,162.18

Southwest Airways Company

Leland Hayward, chrm.-bd., no salary and 143,988 shares common; J. H. Connelly, pres. and dir., \$10,000 salary, and 148,252 shares; T. R. Mitchell, v. p., \$11,200 (up \$1,700), and 260 shares; A. W. Johnson, treas. and dir., \$10,200 (up \$1,200), and 1,300 shares; Walter Roche, sec'y and dir., no salary and 716 shares; C. H. Sullivan, ass't sec'y and counsel, \$8,400 salary (up \$1,200), and 100 shares; Floyd L. Hendrickson, dir. and ass't

sec'y, no salary, and 4,290 shares; Bert Allenberg, dir., 10,400 shares; Daniel T. O'Shea, dir., 2,678 shares; Harry White, dir., 20,254 shares.

Turner Airlines, Inc.

Roscoe Turner, pres., \$9,000 salary; R. Paul Weesner, exec. v. p., no salary; R. W. Clifford, v. p., \$9,000 salary; and R. E. Ross, sec'y and treas., \$7,200 salary.

U. S. Airlines, Inc.

H. R. Playford, pres. chrm.-bd., no salary, and 345,000 shares common; George M. Cleary, dir., no salary, and 11,000 shares common; J. C. Bradford, dir., no salary, and no shares; Hugh D. Carter, dir., no salary, and no shares; W. B. Haggerty, dir., no salary, and no shares; R. W. Starkey, v. p. gen. mgr., \$10,000 salary, and 10 shares; H. F. Gravely, sec'y-treas., \$7,200 salary, and no shares.

AIRPORTS

Including Features Formerly in AIRPORTS AND AIR CARRIERS Magazine

Automobile Parking Charges at Airports

... managers give pros and cons

By KEITH SAUNDERS

AS IF THEY didn't have enough worries in providing parking space for planes and working out equitable charges for use of such space, airport managers nowadays have to give time and thought to the provision of parking space for automobiles and to deciding what charges, if any, should be made for such parking.

It's a controversial question. Some airport managers insist that auto parking space should be treated as a concession and at least pay its own way if not add to airport revenues, while others think the public is entitled to park free at airports built with public funds.

A survey of the practices at a cross-section of commercial airports reveals that free parking is the prevailing policy at a majority of the fields, but that some larger airports have found parking fees and parking meters not only desirable but necessary.

Regulation of Parking

Asked to state his views on the subject for AMERICAN AVIATION,

Truman Miller, manager of the Raleigh-Durham (N.C.) Airport, had this to say:

"It seems to us that the principal justification of parking meters would be regulatory, rather than revenue-bearing. The cost of the traffic officer to handle violations could, of course, be justified at major airports where handling automobiles poses a serious problem, but in our case, which undoubtedly holds for the majority, this does not apply."

Pointing out that his lease with the restaurant concessionaire is set up on a basic monthly rental with overriding commission if gross revenue exceeds a predetermined figure, Miller said:

"With parking meters, we could hardly expect to get into the higher brackets of restaurant lease income. As it stands now, we can compensate for no parking revenue with increased income from other concessions."

"Our airport needs revenue, but not at the expense of discouraging the visiting public. I am satisfied that in our case the public would not accept parking meters in good grace

and the net result would be contrary to our prime objective of making the airport a community meeting place."

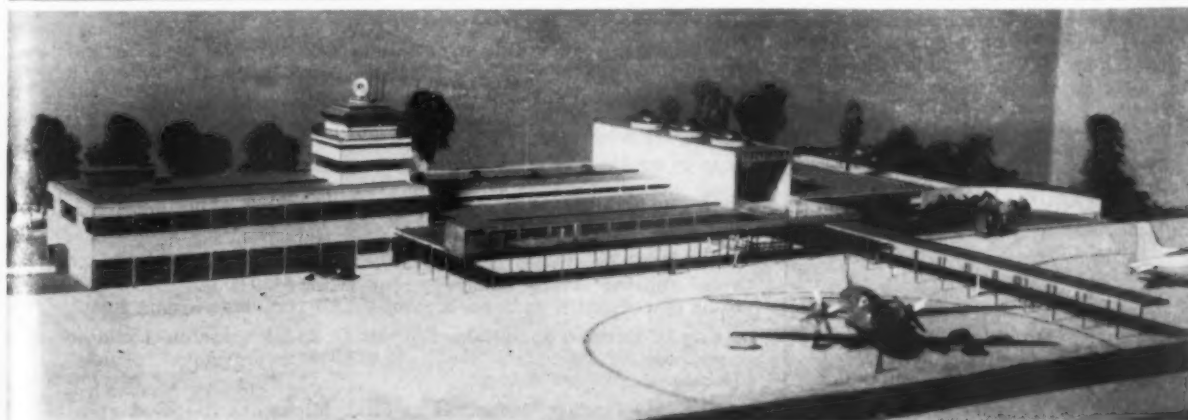
'Poor Merchandising'

Karl L. Clarke, manager of Baltimore Friendship Airport, which has a parking lot with a capacity of 1,800 automobiles just outside the terminal building, says this:

"It is not intended to charge either employees or patrons of the airport for the privilege of using the automobile parking area. We are of the opinion that a charge would not receive favorable reaction from the public and that it would be poor public relations and merchandising."

Parking fees are charged at the San Francisco, Los Angeles and Seattle-Tacoma airports, and with good results, but nearly all other large airports in the west, including Spokane, Butte, Billings, Salt Lake City, Sacramento, Reno and Tucson, provide free public auto parking. John W. Fox, manager of Butte Municipal Airport, summed up the views of the non-chargers:

"I see no reason why there should



Shreveport Terminal—A preview of the utilitarian administration and terminal building for Shreveport's new Class 5 airport is provided in this photo of a scale model of the structure. Half the cost of the \$750,000 terminal will be paid by the Federal government. Building will be

of brick and concrete construction and will really be two connected buildings—a one-story terminal building and a two-story administration building. Samuel G. Wiener and E. M. Freeman & Associates, architects-engineers, designed the structure and prepared the scale model.

be a parking fee at an airport that is built and owned by the taxpayers. Let us not forget that we are still trying to sell aviation in some shape or form to 95% of the public. I have never yet heard of a department store, gasoline service station, or any other business catering to the public, charging an entrance fee to come in and shop."

Leased to Concessionaire

The airports that charge for parking have a spokesman in **Louis R. Inwood**, director of aviation at **Kansas City**, where 100 of the best spaces on the airport for auto parking have been leased to a concessionaire. These spaces are right alongside the terminal door, whereas the free parking space is a block or so away.

According to Inwood, when the parking concession was first opened there was raised a hue and cry that a public airport "had no right to do this dastardly deed," but a careful analysis of the complaints revealed that they were not coming from the general public but from people who worked on the airport.

These people, he said, had parked their cars all day long adjacent to the airport restaurant and thus prevented the cash customers from even getting close to the terminal building. One- and two-hour parking limit signs were tried, but enforcement was costly and led to a lot of hard feeling. The present system, by contrast, works beautifully.

"Any person working in a downtown area of a city does not hesitate to pay for car parking, but let that same individual move to an airport and he immediately becomes insistent on having everything furnished free, including car parking," said Inwood. Kansas City doesn't give them free space right at the terminal building, but the charge is only one-half the cost of parking in downtown KC, being 15c for the first hour and 10c each hour thereafter, with a maximum mark-up of 50c for 24 hours.

Surprising Revenue

One month this summer the parking lot operator paid the city \$1,375 as its net share, after making good money for himself. Commented Inwood: "I can assure you that while the revenue is very welcome, the Kansas City Municipal Airport had no idea there was that much revenue in a parking lot and sincerely installed the lot from a 'service to the customer' point of view. Had we known the amount of revenue involved, our motives might have been different . . . My only regret is that we can't find 99 more types of concessions like this auto parking lot

AIRPORT NEWS DIGEST

- **The Senate-approved bill for the construction of a \$14 million commercial airport in Fairfax County, Va., to serve Washington** was passed by the House on August 25. Minor amendments made by the House were expected to be acceptable to the Senate, assuring passage of the bill.

- **Pacific Airmotive Corp. has taken a lease on the former Cal Aero Airport near China, Calif., 35 miles southeast of Los Angeles, and is renaming it the Pacific Airmotive Airport.**

- **Commissioners of the Port of New York Authority** have approved construction of a \$735,000 ten-story steel and masonry control tower to replace the inadequate temporary tower at Idlewild Airport. In another action, the commissioners approved purchase of a Hiller Model 360 helicopter to expedite visits of its engineering and supervisory personnel to the four airports operated by the Authority.

- **Sky-Chefs, Inc., has opened its second-floor dining room at Denver's Stapleton Field, shortly after opening the first floor coffee shop.** Two facilities cost \$250,000. John J. Mayer is general manager.

- **Bids have been opened on modification of the FIDO system at Los Angeles International Airport.** Bid specifications call for completion of the installation of 203 supplemental burners in 150 calendar days.

- **The runway at Boeing Field, Seattle, is to be lengthened to 10,000 feet for flight testing of the Boeing XB-52 jet bomber now in development.** The government will pay half of the cost, estimated at \$400,000 to \$500,000, and King County, Wash., the remainder.

- **CAA on August 15 discontinued the complex routing of aircraft previously ordered to minimize noise in the area of New York International Airport, La Guardia Field and Newark Airport.** Plan was found to be impracticable.

- **The Massachusetts State Senate defeated by a roll call vote of 22 to 15 a move to have Barnes Airport in Westfield bought by the state for \$125,000.**

- **The Association for the Removal of the Detroit City Airport** has decided not to take its airport abandonment fight to the voters in the November election, but has served notice it may do so in the 1951 spring election if the City Council doesn't vote meanwhile to close the field.

- **St. Louis is contesting action by a county board of equalization which would tax the city about \$150,000 this year for a city-owned building leased to McDonnell Aircraft Corp. at Lambert-St. Louis Municipal Airport.** Building was assessed by the county recently at \$3,486,380.

- **The Fred B. Prophet Co. of Detroit, large industrial catering concern, has taken over the restaurant, bar and news stand concessions at Lockheed Air Terminal, Burbank.**

- **With income exceeding expectations and expenses running below advance estimates, San Francisco Municipal Airport had its best financial year during the fiscal year ended last June 30.** It came within \$38,000 of meeting all operating and maintenance costs out of airport revenues.

- **A \$2,850,000 bond issue for the continued improvement of Logan International Airport, Boston, has been approved by both branches of the Massachusetts legislature and is expected to be approved by the governor.**

- **The Minneapolis-St. Paul Metropolitan Airports Commission** has voted approval of a preliminary request for \$630,000 of Federal funds to be placed in the next revision of CAA's National Airport Plan.

- **City of Houston has retained Wyatt C. Hedrick, architect and engineer, to prepare plans for a \$2,917,908 improvement project at Houston Municipal Airport.**

- **The City Finance Committee at Flint, Mich., has approved appointment of a bond expert to prepare a revenue bond issue to finance construction of a new airport terminal building, major part of a \$458,000 improvement and expansion program at Bishop Airport.**

What's the success secret of Shell Airport Dealers?



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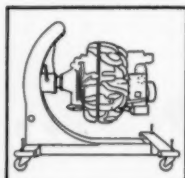
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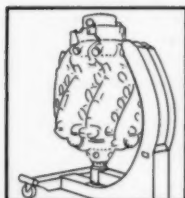
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horizontal position



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AIRPORTS

concession. Our problem would be easy from there on out."

A. B. Curry, director of the Dade County Port Authority, has some parking meters in operation at **Miami International Airport** but is not a bit proud of the fact and would not have them at all except as a means of conserving a limited amount of parking space near the terminal for the use of the general public.

Curry, one of the top airport executives in the country, is convinced that a terminal building is *entirely* (his italics) for the use and convenience of airline passengers and is apprehensive lest the public be forgotten in the incessant quest for more airport revenues.

Against Terminal Meters

"I believe," he said, "that the use of parking meters for short-time parking at a terminal is one of the worst public relations that can be created. I believe also that parking meters should be placed further back from the free parking space so that the non-users of the airlines would have some place to park at a slight fee.

"Insofar as revenue from the concessionaires is concerned, I believe that the building of good will by free parking will enhance the income. In my opinion, about the only free facility in some terminals left for the general use of the public is the cuspidor . . ."

There are no parking meters and no charge for parking space at **Atlanta Municipal Airport**, where **Manager Jack Gray** says: "We believe that parking meters tend to discourage patronage at the airport other than airline passengers and would reflect in our revenues that are derived from concessions on the airport. Under our present set-up, we cannot justify charging for parking."

Fees at New York

A strong advocate of parking fees is the **Port of New York Authority**, which says it has found that the public is willing to pay for service that includes: (1) Parking space adjacent and convenient to the terminal; (2) Paved, illuminated, well laid-out and protected parking areas; and courteous, uniformed parking attendants.

"Efficient vehicular parking is a specialized business," says **Robert S. Curtiss**, director of the Port Authority's Department of Concessions and Revenues. "I doubt that there is a source of revenue at an airport that will produce as high a return on invested capital as will parking operations.

"This income potential has been frequently overlooked through the

lack of an economic study and parking space planning, because of the fear of public criticism, and the very questionable position that a parking charge will reduce spending at other airport concessions.

"The public at an airport expects efficient service, accommodation and convenience. Revenue from vehicular parking will go a long way in enabling management to meet those demands. The public is entitled to an efficient parking operation, which becomes an airport liability unless a fee is charged."

Visitors Mean Income

Col. H. K. Roberts, manager of **Byrd Field, Richmond, Va.**, argues the opposite side of the question on the following grounds:

"We have recently opened a new terminal building, which we are anxious to have the public see.

"An increase in air travel can be expected from many who initially come to the airport merely as casual visitors or sightseers.

"Volume of visitors increase revenue from concessions, all of which are on a percentage of gross basis.

"Base operators on the field have picked up some charter business and some flight business as a result of increased visitation to the airport.

"One of the appeals of air travel has been the lack of costs other than the actual fare, and the imposition of small fees for other services has a tendency to weaken that appeal at a time when air transportation needs all possible advantage in order to be competitive with other means of transportation."

There you have it. On some airports it is a good practice to charge for auto parking, on others it is anathema. It seems to be largely a matter of local conditions and the volume of parking to be handled. For the most part, though, the trend is toward free auto parking at airports.

AIRPORT PEOPLE

H. H. Howard, director of sales for the **Caterpillar Tractor Co.**, was elected chairman of the board of commissioners of the newly created **Greater Peoria Airport Authority**.

C. R. K. (Russ) Johnson, manager of **Capital Airport** at **Springfield, Ohio**, since Sept., 1947, has resigned to enter private business. His successor has not been named.

Robert W. Moore has resigned as manager of the **Bluffton-Wells County (Ind.) Airport**.

Robert Pike has been named manager of the **Joplin (Mo.) Municipal Airport**.

AIRPORTS



Bottom Loading—A Shell Oil Co. aviation gasoline truck at Washington National Airport is shown here being filled with a new bottom-loading technique developed by Shell engineers to attain safer, easier and more economical loading operations. The new technique features the same type of pumping equipment used by Northwest Airlines in underwing aircraft refueling operations. Elimination of conventional loading rack is a major advantage.

CAA AIRPORT GRANTS

For the two weeks ended July 10, the Civil Aeronautics Administration made Federal-aid airport grant offers totaling \$7,244,037 to 53 communities, as follows, with classes in parentheses:

Alabama: Birmingham Municipal (6), \$36,300.

Alaska: Fort Yukon Mun. (3), \$96,000.

Arkansas: Camden Mun. (3), \$7,700; Magnolia Mun. (3), \$4,800; Walnut Ridge Mun. (4), \$14,500.

California: Auburn Mun. (2), \$3,000; Borego Valley Airport (2), \$9,745; Happy Camp Airport (2), \$32,150; Modesto (3), \$11,243; Oakland Mun. (5), \$395,000; Palm-dale (5), \$83,488.

Connecticut: Bradley Field, Windsor Locks (4), \$257,500.

Florida: Miami International (7), \$710,330 (five grants).

Idaho: Idaho Falls Mun. (3), \$1,001; Phillips Field, Pocatello (5), \$49,366.

Indiana: Freeman Mun., Seymour (4), \$9,200.

Illinois: O'Hare Field, Chicago (5), \$1,750,000 (two grants); Litchfield Mun. (1), \$29,000.

Iowa: Mason City Mun. (4), \$37,500.

Kentucky: Ashland (2), \$121,600; London-Corbin (2), \$106,500; Mayfield-Graves County (1), \$50,000.

Louisiana: Rayville Mun. (1), \$29,631.

Massachusetts: New Bedford Mun. (4), \$140,000; Harriman Airport, North Adams (2), \$24,000.

Mississippi: Vicksburg Mun. (3), \$1,361.

Missouri: St. Joseph Mun. (5), \$147,161.

Montana: Conrad (2), \$28,157; Hot Springs (1), \$2,008; Sandpoint Mun. (2), \$28,423.

New Mexico: Farmington Mun. (3), \$53,176.

New York: Albany Mun. (4), \$37,400; Niagara Falls Mun. (4), \$72,450; Hancock Field, Syracuse (4), \$20,070.

Oklahoma: Shawnee Mun. (3), \$10,381; Sulphur Mun. (1), \$6,383.

Oregon: McMinnville Mun. (4), \$3,850; Portland (4), \$88,007.

Pennsylvania: Lancaster Mun. (3), \$5,000; Cub Haven Airport, Lock Haven (2), \$14,900; Philadelphia International (5), \$600,000.

South Dakota: Sioux Falls Mun. (6), \$27,000.

Tennessee: Tri-Cities Airport, Bristol (4), \$39,000 (two grants); McGhee-Tyson Airport, Knoxville (4), \$285,000.

Texas: Love Field, Dallas (5), \$124,067; Ft. Worth International (5), \$600,000; Houston Mun. (5), \$98,217; Lubbock Mun. (5), \$29,142; San Antonio Mun. (4), \$205,900; Willbarger County Airport, Vernon (3), \$33,000.

Virginia: Norfolk Mun. (4), \$381,500; Byrd



"Have you seen the BIG NEWS on Page 9?"

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AIRPORTS

Field, Richmond (4), \$90,000; Roanoke Mun. (4), \$205,000.

These boosted to 1,425 the total of grant offers made under the Federal Airport Program, and increased the Federal funds involved to \$125,399,306.

Airport Circle Segments

A new type of low-cost, long-wearing airport circle segment has been announced by the Robinson Clay Product Co. of Akron.

Called "Airguide," the product is made of vitrified clay painted with reflective paint and is used to construct marking circles around tetrahedrons and field windsocks.

Each segment is six feet long, comprising two three-foot pieces of semi-circular clay, and 26 segments make a raised, luminous dotted circle 100 feet in diameter. Requiring no mechanical anchorage to the ground, the segments are easily installed and easily relocated.

A four-page illustrated bulletin giving all details about "Airguide" can be had by writing to the Robinson Clay Product Co., 65 W. State St., Akron 9, Ohio.

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Visual Information—This large wall map, designed by Ben Mayer, right, answers for passengers at Los Angeles International Airport many of the questions that normally would be directed at airline and airport employees. Each of the important sections of the city is set off on the huge map in sharply contrasting colors, identified by legends. Principal highway arteries to each section are also well outlined. The viewer easily locates the airport and the direction of the section in which he is interested, thus averting the necessity for most questions. Pointing to the map is Woodruff de Silva, manager of the airport. Similar maps are located in two other buildings on the airport.

AMERICAN AVIATION

PRETESTED IDEAS

Use for Old CAA Lights

CCOURSE LIGHTS which have been removed from abandoned or discontinued Civil Aeronautics Administration airway beacons, can be used



to good advantage as "stub" approach lights to aid low visibility landings where the airport is not equipped with the standard CAA neon ladder, slope line or combination slope line and flashing condenser discharge lights.

They may also be useful as "interim" lighting approach aids at those fields awaiting the installation of the standard approach lights, serving to augment the present range or threshold lights. A test was conducted at La Guardia Airport using course lights for this purpose and the picture shows Bill Doyle, Crouse-Hinds engineer at New York, with Walter Bennett, Port Authority electrical supervisor at La Guardia, inspecting the installation.

Two of the course lights were installed a few hundred feet ahead of the range lights adjacent to the runway floodlights—but faced toward the approach. The lights were about 500 feet apart and were equipped with 500-watt lamps. They were installed on wooden raised platforms and were fed from the floodlighting transformer vaults.



Low-Cost Bonanza Jacks

THIS OPERATOR saved a considerable amount of money by designing and building his own jacks for servicing the Beech Bonanzas at his field. All parts used in the construction of the jacks were found in the scrap pile at the airport.

The base was a gas-pit cover. The jack itself was cut down from an automotive grease-rack jack which was about five feet high. The reinforcing supports are sections cut

from old wing struts which are welded to the base and the jack. Two bureau casters are welded to the base to aid portability of each jack.

Bernard Chodos, service manager and chief pilot of the Westchester Airport, Inc., Armonk, N. Y., who designed these jacks and is shown operating one in the picture, says that they required about four hours for one mechanic to build. They are easy for one man to operate and can readily be moved about the hangar.



Flight Area Map

A FLIGHT practice area map conspicuously located in the cockpit of all planes used in flight training will prove valuable to students and instructors and will add to the safety of flight operations. The one shown in the photo is held between two

sheets of transparent plastic and is hung by a strap on the left side of the cockpit where the student can make quick reference to it. On the reverse side of this one is a cockpit check list for the particular airplane. It is not a new idea but one which will bear repetition.

Twelve Associations Agree On Joint Mobilization Plan

By BARBARA J. WARD

IN THE WEEKS that have gone by since American troops were committed to Korea, no air mobilization plan has been forthcoming from the government.

But the twelve major private aviation organizations have met and agreed on a civil air mobilization plan which provides both security and effective use of civilian aircraft. And some state governments already have established air-aid plans for a war emergency.

The most monumental achievement in the past month has been the getting together and working together of representatives of twelve private aviation associations in an Emergency Aviation Council composed of: Aircraft Owners and Pilots Assn., Airport Operators Council, Association of Airport Executives, National Aviation Trades Assn., National Flying Farmers Assn., National Association of State Aviation Officials, National Air Council, National Aeronautic Assn., Corporation Aircraft Owners Assn., Aeronautical Training Society, Aircraft Industries Assn., and Aviation Distributors and Manufacturers Assn.

Submitted to CAA

This group agreed on one plan for civil aviation mobilization, which they submitted at the August 21 meeting of CAA's Aviation Development Advisory Committee. The Committee rewrote and added to the plan before forwarding it to CAA Administrator D. W. Rentzel for comment and possible submission to the National Security Resources Board.

If NSRB accepts the plan—or a plan which any state or group of operators might submit—it will become the blueprint for the first national civil air mobilization this country has known.

To prevent grounding of planes and airmen during a war emergency, the Civil Air Mobilization Plan submitted by the association recommended the following:

1. Complete the national and state surveys of civil air resources.
2. Establish identification for airmen and ground crews.
3. Plan for supply of aircraft parts and critical materials.
4. Form state aviation councils to advise on plans.

5. Select control airports which would approve flights, maintain aircraft and pilot records and comply with security directives.
6. Issue security rules and forms for comment.
7. Conduct simulated operations to pre-test security rules.
8. Encourage training and practice of missions by aviation personnel.
9. Encourage physical check-ups to keep pilots licenses valid.
10. Arrange police authority for appropriate personnel.
11. Encourage operators to buy fuel, parts, etc., not now in short supply.
12. Circulate plans, gather information and stimulate and guide volunteer effort.
13. Fix rates for aircraft rental on government missions.
14. Encourage publicity to create interest in the role of local airports and civil aircraft for public welfare.

When the Advisory Committee's plan, developed from the above points, reaches Administrator Rentzel, it will be spelled out in consid-

erably more detail. Measures will be recommended for two periods—an interim period of partial mobilization and an all-out war.

State Defense Plans

For over two months, Michigan's Planning Committee for Civil Defense has been working out a state defense plan to guard the so-called "Arsenal of Democracy" in the metropolitan Detroit area and the vital Soo Locks. In the event of atomic attack, the 3,000 registered aircraft and 4,300 registered active pilots in Michigan will mesh into a civil defense plan.

Licensed airports would become control points for surface and air transportation of evacuees, assembly of emergency supplies, medical facilities and food. In the event of a general catastrophe, citizens would be directed to these points.

Two laws adopted by the last Wyoming state legislature have provided a nucleus for Wyoming's defense organization. One authorizes the Wyoming Aeronautics Commission to supervise and coordinate all air activity made necessary through any emergency, as well as the air search and rescue of aircraft missing in flight or involved in accidents.

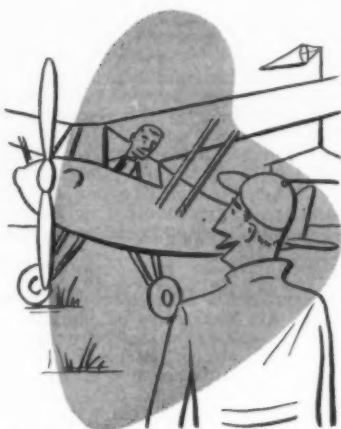
A second law sets up the Wyoming aviation police. The aeronautics commission is required to appoint air



NATA Support—

Minnesota Fixed Base Operators contribute \$1,140 to National Aviation Trades Association in expression of support for the work which the group is doing for the industry in Washington. Shown presenting the money to NATA President Arthur Currey are, left to right, G. B. Van Dusen, president of Van Dusen Aircraft Supplies; B. G. Vandre who heads the operators group in Minnesota, and Harry Shaffer, president of Inter-State Credit Corporation.

LOCAL OPERATIONS



"Have you seen the **BIG NEWS** on Page 9?"

deputies in towns and cities having active airports.

On August 2, 139 fixed base operators of Illinois met with the State Aeronautics Board and Civil Air Patrol representatives to talk over defense and civil aviation aspects of the Korean situation.

State Aeronautics Director Joseph K. McLaughlin stated that, while personal aircraft and pilots could be absorbed into the CAP, it was difficult to see how executive and operator-owned aircraft could then carry out their primary purposes or how it could help CAP's assignment.

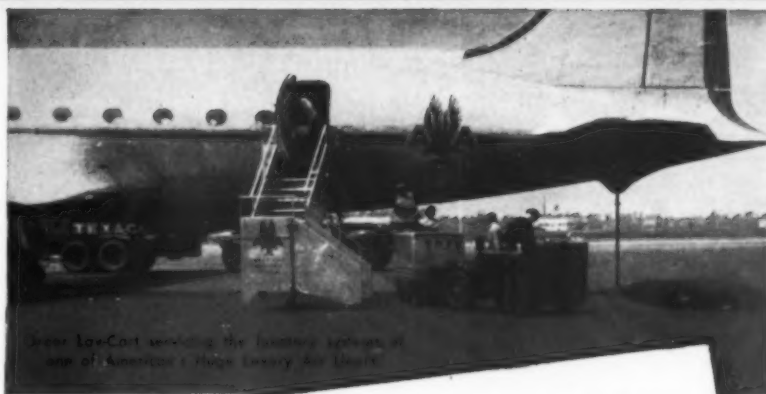
Colonel Charles Richardson, Illinois CAP wing commander, maintained that CAP has its weaknesses but it has the advantages of being federally recognized and national in scope.

California Concerned

William E. Carey, Director of Aeronautics for California, has pointed out that, if and when an A-bomb strikes, there will be no further need to keep civil aircraft on the ground in that area nor will there be any question of sabotage from civil aircraft, if a well-organized civil aviation group is screened in advance to assure that it is worthy of the trust imposed.

He said, "I can visualize the whole area dependent upon aerial transportation both for the rapid bringing in of supplies and emergency personnel (doctors, nurses, police officers, firemen, public utility specialists, etc.) and also for the rapid evacuation of casualties. This plus the utility of the airplane for observation and direction of ground activities and for emergency communications would seem to me to justify an important role in all defense planning."

SEPTEMBER 4, 1950



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USAF Inspecting Sites

The Air Force is still inspecting possible sites for its proposed **basic flight training schools** to be operated by civilian contractors. When locations are selected, specifications will be mailed out to interested civilian flight school operators for training a total of 1,350 USAF cadets.

So far, the USAF won't talk about the number of schools to be established, but there are expected to be three. This is in line with present USAF basic flight schools, which accommodate about 500 cadets each. Operators interested in the contracts should write to the Contract Relations Section, Procurement Division, Air Materiel Command, Wright-Patterson AFB, Dayton, Ohio, and ask to be put on the mailing list.

University Flight Training

The **Air ROTC Bill, S. 3846**, which would authorize flight training of Air ROTC cadets at 127 universities (**AMERICAN AVIATION**, July 15) is apparently stymied in the Armed Services Committees of the House of Representatives and the Senate. Operators located near universities might contact the faculties to explain the aim of the bill, which is to keep the Reserve Officers Training Corps at adequate air strength and obtain highly qualified personnel for the Air Force. It would mean financial assistance to many students.

If the operators and the universities get behind this bill, it may pass yet before Congress adjourns. One college in Elkins, W. Virginia, has already sent a delegation to Washington to see Congressmen in support of the bill.

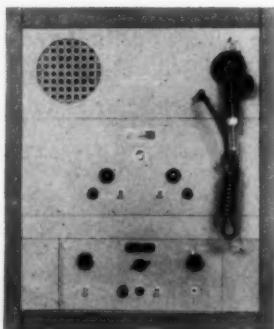
USAF Refresher Facilities Adequate

Refresher facilities available within the Air Force are adequate to satisfy current and projected requirements, according to information received from the Office of the Director of Training, USAF, by Charles A. Parker, Washington director of National Aviation Trades Association. The information came in response to Parker's offer of the cooperation of the over 1,000 civil flight and ground school members of NATA in any contemplated military training.

Local Airport Radio

Private airfields have just been assigned a common VHF airport radio frequency of 122.8 mc. Operators who want to set up such radio facilities at their airports should contact the nearest Federal Communications Commission field office and apply for an operating license. Arrangements for issuing licenses are now being completed in Washington.

War surplus VHF equipment can be converted to 122.8 mc, or equipment can be obtained already set up for the frequency. One new airport radio-telephone set designed specifically for the use of private airport operators has just been put on the market by **Schuttig and Company, Inc.**, Ninth and Kearny Sts., NE, Washington 17, D. C. Its Tel-Air airport radio operates on the recommended frequency of 122.8 mc, with a transmitter output of 10 watts and a receiver sensitivity of one microvolt. It features ability to operate continuously, simplicity and optional remote control. Cost is \$475 before tax.



Frequency Discontinued

Listening watch on the frequency 6210 kc. is being discontinued at all control towers and communications sta-

tions except those located at international airports. Reason: due to increase in number of communications facilities and decrease in their spacing, FCC believes the frequency has become of little value to aircraft flying domestically. Licenses now in effect for private aircraft radio stations authorize use of 6210 kc; but after September 1, 1950, assignment of the frequency will not be included in new or renewed private aircraft licenses unless the applicant submits a supplemental statement with Form 404 specifically requesting the frequency.

Miami Air Show?

Word is expected soon as to whether or not Miami will hold the **All American Air Maneuvers** in January. In the past, the stunt-type air show was sponsored by the Greater Miami Aviation Association. Reports are that Mayor Wolfard, S. C. (Jiggs) Huffman and many others now believe that the Air Maneuvers would have more success as an aviation industrial exhibit, with emphasis on new aircraft and improvements in aviation facilities.

Miami in January provides the ideal place and time for such an industrial air show—it could become the yearly meeting ground of the aviation business and a means of advertising new equipment and exhibiting its use. Demonstrations of new instrument flight aids such as the omnirange, crop spraying and dusting, and rescue work with helicopters would draw the crowds.

Surround That Sock

In the cause of safety, CAA Administrator **D. W. Rentzel** is about to receive a letter from **Louis Barr**, president of the Washington (D. C.) Association of Flying Clubs, which carries the blessings of its 176 members. The letter recommends that CAA take steps to make airports and wind socks easier to locate.

One suggestion to help pilots locate small-grass airfields or airfields with dark runways is to paint a large white circle in a set position on the field, with the wind sock located in the center of the circle. This last would stop that loud gnashing of teeth so frequently heard in the traffic pattern.

It is recommended that every airport be air marked with its name on a hangar roof or on the ground.

Certification Progress

• Those who consider the **Jamieson Jupiter**, under construction at the Jamieson Aircraft Co., DeLand, Fla., one of the more promising personal planes under way will be disappointed to learn that CAA type certification flight tests have not yet been begun. CAA reports that static tests are still being made, as aircraft structural trouble was encountered necessitating re-running the tests.

• CAA area representatives report that the **Fulton Airphibian** will receive CAA type certification within the next month. A roadable aircraft, the Airphibian was designed by Robert E. Fulton, to be produced by Continental, Inc., Danbury, Conn.

• A wall map showing civil aircraft population of U. S. is being distributed by Aviation Products Division of Goodyear Tire and Rubber Co., Inc., Akron, Ohio. In addition to showing registered aircraft concentration in shadings of black and white, by states and counties, the numbers of registered civil aircraft per state are listed.

• The **Aviation Country Club of Long Island, Inc.**, which sold its 80-acre flying field at Hicksville, N. Y., in March, has voted not to locate elsewhere. The club will be dissolved.

• **W. L. "Cur" Ross**, who was manager of Dallas Aviation School throughout the war, will manage the new Aviation Schools, Inc., which has just been formed by Aviation Activities Co. of Dallas, Texas. The school will train aircraft engine mechanics at Love Field in quarters formerly used by Dallas Aviation School. Major William F. Long, former owner of Dallas Aviation School, holds an interest in the new corporation.

—BARBARA WARD

AMERICAN AVIATION

CAA Specification Changes

Ryan Navion is approved use of 240-hp. Lycoming O-435-C2 engine. Baggage compartment door installed in accordance with Metropolitan Airports drawing 5004-B is also authorized by Specification A-782.

Cessna 140-A is approved for use of McCauley 1A90-CF, CH and 1B90-CM propellers, and for installation of two 21-gallon wing fuel tanks (replacing 12.5 gallon tanks), by Specification 5A2.

Bellanca 14-13 series is approved for installation of 165 hp Franklin 165-B3 engine, by Specification A-773.

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Forms close 20 days preceding publication date. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Ave., N. W., Washington 5, D. C.

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PROCUREMENT, sub-contract or vendor contact position desired. Free to travel west coast or entire country provided proper connection made. Knowledge of government procurement. Full resume covering background in purchasing & sales in airline, airframe & automotive industries.

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Central Airlines, Inc., 6109 Camp Bowie Blvd., Fort Worth, Texas, needs experienced airline representatives for small town solicitation. Prefer a man that has lived in a small town that can speak the same language as small town folks. Write details in first letter to ALLEN S. MAESTRE, Traffic Manager.

NEW PRODUCTS WANTED

Manufacturer wants to buy design engineering, blue prints, tooling and all rights to aircraft products. Items made during last war that can be improved or modified also acceptable.

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New Products Division
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CONSOLIDATED VULTEE AIRCRAFT CORPORATION

WINGS OF YESTERDAY

25 Years Ago

The Naval airship, Shenandoah, was wrecked over the Ohio Valley in a severe storm on September 3, 1925.

Two petitions for the establishment of air mail routes were received by Postmaster General New—one for a route between New York and Miami, Fla., and the other calling for an overnight air mail service between New Orleans and Chicago.

10 Years Ago

(IN AMERICAN AVIATION)

The War Department entered into an agreement with Pan American Airways for the training of 850 flight-navigation cadets in long-range navigation.

Eastern Air Lines had leased a 16-story building at 10 Rockefeller Plaza for the company's headquarters.

The Army and Navy had awarded \$39.7 million in aircraft contracts; Douglas Aircraft Co. planned a \$20 million expansion, including a new factory at Long Beach, Calif.; Ford Motor Co. was to build 4,000 Pratt & Whitney radial engines.

LETTERS

Airline Seats

To the Editor:

In reference to your Extra Section of June 15 on the state of aircraft seats:

There comes a time I suppose when every one should take pen in hand and answer editorials. Especially when written by someone who apparently does not get around on the right airlines.

Transport Equipment Company has delivered hundreds of seats to major airlines (over 1,200 passenger places to TWA alone) and I take from your inference that airlines and ourselves are all wrong in building improved recline mechanisms and foam rubber cushions, and should go back to the

old no sag springs and hog hair. It wouldn't hurt you to talk to a few maintenance supervisors in regard to the use of light-weight steel tubing seats in comparison to the magnesium of the Warren McArthur era. Besides, if they were so good how come they are out of business?

Get hep boy, there is more comfort built into our hi-density model than you ever found in the most deluxe version of a Warren McArthur. For proof park that localized spot in a TWA Constellation Sky Coach and have a good ride.

What is more, we didn't happen in the seat business, we did it deliberately. Just you wait and see.

Tell us the names of those airline engineers that don't know what is going on in the industry and we will put them wise.

GORDON K. JONES

Transport Equipment Company
Burbank, Calif.

Editor's Note—Quoted below is a direct quotation from the transcript of the ATA Engineering and Maintenance Conference last spring which speaks for itself.

"Will the operators give their opinion on which is the most rugged and trouble-free passenger seat developed to date? MR. HOLZAPFEL (WAL): I almost choked on that one. Does anyone have a real good chair?"

"MR. CARRUTHERS (TCA): We have had good success with the Warren McArthur 358-A2; very little trouble with it."

"MR. HOLZAPFEL (WAL): Which are not available?"

"MR. CARRUTHERS (TCA): Right."

"MR. CLARK (BNF): Relatively speaking, we believe the Warren McArthur commonly used on the DC-4 is better than what has been used."

"MR. HARRINGTON (NWA): We agree with Braniff. The Type 406 Warren McArthur has given us the best service, but it still leaves much to be desired."

"MR. McQUIRE (AOA): I have a note here from Tulsa that indicates Douglas DC-6 day plane seat is very satisfactory, except for the hydraulic locking cylinder. As far as AOA operation is concerned, it appears that the old McArthur 290 seat has very little maintenance; on the other hand, it is about the most uncomfortable one we have."

"MR. HOLZAPFEL (WAL): I can't understand why he went out of business."

Soil Doctors

To the Editor:

We have just received our August 15th issue of American Aviation, and note with great interest Miss Ward's excellent article on dusting and spraying hazards. She covered the subject most thoroughly and is certainly to be congratulated.

The reactions from local level C.A.A. per-

sonnel, as well as operators with whom we have discussed the article, have been most favorable.

I have developed almost a complete phobia on this agricultural aviation picture. It appears to me that our crop dusting pilots are actually functioning (or attempting to function—whether they know it or not) as doctors of the soil. I refer now to not only knowing what they are doing in connection with sprays they put on growing crops to kill weeds and bugs; but also to the items of fertilization and "trace elements."

HAROLD R. HANSEN, Manager
Aviation Department
D. K. Macdonald & Co., Inc.
Exchange Building, Seattle 4, Wash.

BOOKS

FLYING THE OMNIRANGE, by Charles A. Zweng, published by American Navigation Service, North Hollywood, Calif. and Weems System of Navigation, Annapolis, Md. 101 pages, illustrated. Price \$4.00.

Written for the average pilot, this new manual is a basic text on the VHF omnirange radio navigation facilities which will replace low frequency, four-leg ranges. It explains the principle of VHF radio operation, use of omnirange flight instruments now available and use of the accessory course-line computer and distance measuring equipment. Well illustrated and indexed, with 77 test questions and a glossary of radio terms.

AERONAUTICAL PAPERS—ALBERT F. ZAHM, published by the University of Notre Dame in two volumes. Over 1,000 pages, well illustrated. The first volume deals with Zahm's papers from 1885 through 1919, the second with those published between 1920 and 1945. Price \$7.50 per volume, \$15 per set.

The publication of the Zahm papers in the style and quality presented here is a distinct public service. As early as 1889 Dr. Zahm made tests at Notre Dame on full-scale gliders, airplane motors, rocket propulsion for airplanes and propellers. Nearly 40 of the papers cover experimental and theoretical work by Zahm when he was director of the Navy Aerodynamical Laboratory from 1917 to 1929. Others include those compiled while he was a student or professor of theoretical and applied mechanics; while chief of the Division of Aeronautics of the Library of Congress, etc.

Aeronautical Papers covers many controversial papers by Zahm. For instance, Zahm, whose early papers on the significance of wind currents were used by the Wright Brothers in their later work, contends that the major honor for developing the first airplane is due Samuel Langley, not the Wrights. The importance of his work is underlined by the request of the Institute of the Aeronautical Sciences that the papers be assembled in their original form as has now been accomplished. A valuable set of books for the serious student of aviation.

FUNDAMENTALS OF POWERPLANTS FOR AIRCRAFT, by Professor J. Liston. Published by the Tri-State Offset Company, 817 Main Street, Cincinnati 2, Ohio. About 300 pages, illustrated. Price: \$5.50.

OBITUARY

Robert B. Farquharson, Jr.

Robert B. Farquharson, Jr., 40, assistant to the sales manager of Pratt & Whitney Airport Div., died August 25 following a six day illness with poliomyelitis. He joined Pratt & Whitney in 1939 after six years of Naval service, and was formerly in the company's west coast office and was P&W representative at Dayton between 1944 and 1946.

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IN FLIGHT

A PAGE FOR ALL PILOTS

Private Pilot Privileges Expanded

Private pilots will be allowed to dust their own crops, demonstrate aircraft and carry out other flights incidental to their business or employment, according to Civil Air Regulation Amendment 43-3, to become effective September 11, 1950. Prior to the amendment, private pilots were restricted to flights made solely for personal transportation. After September 11, flights in connection with business or employment, if the flight is not made for hire, will be allowed.

An aircraft salesman may demonstrate aircraft in flight to prospective customers if he has at least 200 hours of flight time, farmers holding private pilot ratings may dust their own crops and real estate agents who have private pilot ratings may carry prospective purchasers of real estate on flights in connection with the sale of property.

Prize-Winning Club

Congratulations to the Pegasus Flying Club of Glen Burnie Airport, Md., for winning the annual J. S. Pfeiffer award of the Baltimore NAA Chapter for outstanding contribution to private flying. As Amos B. Jones, president of the club, says, "All of this for doing what we love to do—fly!"

The club is the largest flying club in Maryland and, in the four years since it was formed, has become one of the most active on the east coast. Only membership requirement is to have soloed, and members now number 75, with 30 privately owned planes.

Twice a month the club holds a Sunday luncheon or beach picnic, and overnight trips are held two or three times a year. A place of interest is selected and a committee is appointed to go over the route and make all reservations and arrange for entertainment, transportation and meals.

This year, the start of their tri-state air tour was a part of the opening ceremonies at Friendship International Airport, with the pilots interviewed on television and kissed goodbye by the local beauty queens.

Other activities have included a steak fry, a moonlight boat cruise, a fly-in oyster roast, an annual dinner dance at one of the hotels and, just recently, night flying on Thursday evenings.

State Aids to Pilots

The work of state aviation commissions is coming to mean more and more to private flyers. Here are some of the recent state publications designed to help pilots find their way:

The 1950 chart of Louisiana, which has just been published by the Aeronautics Division, attempts to give all possible information to pilots flying the Louisiana shoreways. It can be obtained from the Department of Public Works, Baton Rouge, La.

The Iowa Aeronautics Commission of State House, Des Moines 19, Iowa, is working on a state air chart which will eliminate the need for carrying four sectional charts and will be sent free sometime this month to all registered pilots in the state. Although it will be on the regional scale, it will contain all information found on sectional charts and in addition will list private airports and Flying Farmer strips.

A guide to "air accessible" recreation spots has been compiled by the state of Ohio, from questionnaires

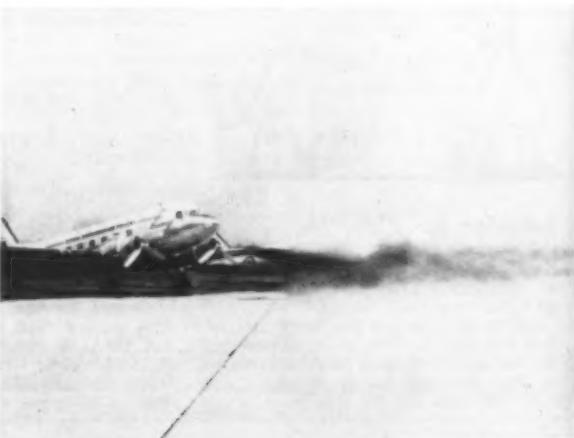
sent to all airports in the state. It gives information concerning types of recreation offered in the vicinity of each airport, availability of transportation, guides, food, etc.

In addition, Ohio's Airport Directory provides an overall pilot reference to airport location, landing area, and services, such as gas, oil and maintenance. The front of the directory gives the airport and town names and a county index for locating the general area. Both publications can be obtained from the Ohio Aviation Board, 501 Wyandotte Bldg., Columbus, Ohio.

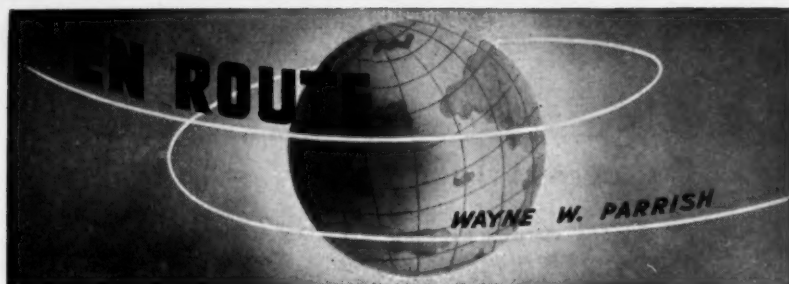
Michigan has gone one step further and published a "Sketch Book of Michigan's Airports and Landing Fields", with a page of the book devoted to each airport. The top part of the page gives a sketch of the city, showing the airport's location. The lower half of the page gives a diagram of the field, runways, location of the wind T, office, lights and obstructions. Under the map is listed the city name, field elevation, latitude and longitude, fuel available, A and E service and whether there is a restaurant. It can be obtained for 50c a copy from the Michigan Department of Aeronautics, Lansing 2, Mich.

CAA's 7th Region office and the states of Idaho, Montana, Washington and Oregon have collaborated on a booklet, "Pacific Northwest Fly-In Recreation Areas." Landing fields and seaplane bases are listed alphabetically with recreation and resort information given along with hotel and transportation accommodations. Write to CAA 7th Region, P. O. Box 3224, Seattle 14, Wash., for a copy.

Missouri's 1950 state map is being given free distribution by the Aviation Section, Division of Resources and Development, Jefferson City, Mo. In addition to 118 public airports, it gives the locations of 118 landing strips of the Flying Farmers and others who operate planes from their own "back yards."



Rain Repellent—This is a new picture showing the effect on visibility when FC-10 rain repellent is applied to one half of a windshield. This repellent, made in Canada, is being marketed by the Regal Air Corp. of New York and costs \$13.95 for a set which is sufficient for 15 windows. The application lasts several months and is unaffected by sun and dirt. In flight it delays icing and after icing has started, the repellent does not affect the anti-icing fluids.



Yankee Haldeman. George Haldeman, chief of the CAA's Aircraft Division, went to London some months ago and, among other things, flew the famous Comet, de Havilland's new jet transport. Everything went fine until the British newspapermen started writing about his flight. One Ronald Bedford wrote a piece for the *London Daily Mirror* that had Haldeman worked up into a lather.

The *Mirror* story was headlined, "A Yank Flies the Comet Today," and here are the first few paragraphs:

"How long will it be before Britain's 500-miles-an-hour-plus Comet jetliner rolls to a fast stop on an American airfield?"

"The answer lies with Grandpa.

"And Grandpa—tubby, thirteen-stone, George W. (for William) Haldeman, fifty-year-old boss of the Aircraft Division of the U. S. Civil Aeronautics Administration—has arrived here to do something about getting the Comet to America."

And on and on. The word "grandpa" was used four more times. And what with also being called "tubby," George was ready to start the war of independence all over again.



Inflation for Kids. The other day I stopped at the lower floor snack bar at LaGuardia Airport and bought a glass of milk. The sign said "Milk, large, 15c," which I thought was high for a glass of milk but the word "large" talked me into it. The glass turned out to be the ordinary size. It struck me as very poor business for an airport snack bar to sell milk for 15c minimum when

LaGuardia, especially, is attracting large numbers of children and their parents for sightseeing tours. Why gyp the kids with such a high price? The more I see of the New York Port Authority the more I'm convinced that it has the poorest public relations and the least business sense of any public corporation I've ever known.



Taxi in Advance. One of the smartest arrangements for getting passengers to their destinations after an airline trip is in force in Paris where the downtown airline terminal is the Invalides railway station. When you get your bags and want a taxi, you report to a clerk at a cash register, tell him where you want to go, and you buy your taxi ticket from him. No fumbling for money at the end and wondering if you're being overcharged, no arguing with the driver, no getting gypped. Extremely helpful for new arrivals from abroad. If you don't have French francs, you exchange them at the terminal instead of having to rush into the hotel and take an unfavorable rate in a hurry.

Kinda Late. Not so long ago Doug Stockdale, TWA's district sales manager in Mexico City, looked all over town for me because a photo of my arrival appeared in the *Mexico City Herald*. The caption said I had arrived "to find out for his magazine the possibilities of making air excursions to Mexico from various points in the U. S." Unable to trace me at any hotel, Stockdale

dropped me a line saying he was sorry to have missed me. I took a look at the news picture and to the best of my recollection it was taken on a trip I made to Mexico in 1940. Where it had been in the meantime, and what prompted the *Mexico Herald* to run it in 1950, is beyond me. But in Mexico you can expect things like that. I had to assure Stockdale that I hadn't even been near the country this year.



Still a Beaut. Into our office the other day came Margaret Mellon, one-time stewardess for Chicago & Southern Air Lines, who was judged "Miss American Aviation" at the Birmingham Air Carnival back in 1940. She was a beaut then, and still is. After winning the title she kept flying for a while, then got married. Now divorced, mother of two children, she is doing public relations work for Beck, Utah and Hopkins Construction Co., Belleville, Ill., near East St. Louis. For several years she was in TV work in Chicago. Address? Well, it's 14 N. Douglas, Belleville.

More on Maps. Previous comments on this page about the need of good airline route maps for amateur navigators continue to bring examples both good and bad. TWA is using on its international routes a series of maps which make up in additional information and photographs what they miss in map detail. Quite attractive . . . British European Airways and Scandinavian Airlines System, Norwegian division, have excellent maps with sufficient terrain detail to aid the customers.

But the guy I'm really indebted to is Herb Ford, American Airlines' sales manager for Washington, who gave me as a gift a set of American Airways maps printed in 1931 and 1932. These were good route maps with lots of detail and of course the passengers were flying low in those days. Some of this set are museum pieces showing routes between New York and Montreal, Nashville and Atlanta, Fort Worth and Houston, Dallas and Brownsville, and St. Louis-New Orleans. Remember when American Airways flew those routes? If you do, you're an old-timer in this business.



"Oh gosh, we all missed the BIG NEWS on Page 9."

Pan American Airways Stratocruiser

COST PER HOUR

\$550⁰⁰



Training in Flight in
The Boeing Stratocruiser

**Bring training costs
down to Earth**

- **\$150,000.00 saved** in the training of 56 Stratocruiser crews
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Training on the Ground in
The Curtiss-Wright-Dehmel Simulator

For data on Curtiss-Wright-Dehmel Simulators write Propeller Division, Curtiss-Wright Corporation, Caldwell, N. J., on your company letterhead.

► That is the 18 months' record of Pan American World Airways ... with a Curtiss-Wright-Dehmel Electronic Flight Simulator!

► The same superior results obtained by Pan American are available to all airline and military organizations. By Curtiss-Wright-Dehmel methods, the characteristics of *any type of aircraft* can be simulated realistically *on the ground* ... where crews may practice problems, too dangerous to create in flight, over and over again until coordinated response to emergencies becomes automatic.

► No longer is it necessary for the Armed Forces to delay training until the delivery of new tactical types ... or to tie-up operational aircraft for instruction. With Curtiss-Wright-Dehmel Flight Simulators, crews may be *pre-trained* ... and periodically checked for proficiency ... on the ground ... at lower cost ... with greater ease ... and in larger numbers.

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FRONTIER AIRLINES, great new combination of the former Challenger, Monarch and Arizona Airways, connects all major transcontinental and regional airlines... serving the people and cities of the Rocky Mountain Empire with modern, experienced,

dependable airline travel. Map shows nearly 5,000 route-miles, linking more than 50 cities and towns in seven states. For dependable engine lubrication in difficult flying territory *Frontier Airlines uses Texaco Aircraft Engine Oil exclusively.*

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Feeders everywhere enjoy major airline maintenance economies with the help of Texaco. Texaco Lubrication Engineering Service sparks practical ideas aplenty for servicing and lubrication procedures that boost efficiency and bring down costs. And with Texaco Aviation Products

you are set up to handle *all* your lubrication jobs with a minimum number of lubricants.

Texaco Aircraft Engine Oil has long been first choice of America's airlines. Today, as for many years past — *more revenue airline miles in the U. S. are flown with Texaco Aircraft Engine Oil than with any other brand.*

Let Texaco help make *yours* a more profitable operation. Just call the nearest of the more than 2,000 Texaco Wholesale Distributing Plants in the 48 States, or write The Texas Company, *Aviation Division*, 135 East 42nd Street, New York 17, New York.



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American Aviation



NEWS ISSUE

Vol. 14 No. 8

Entered as Second Class Matter

Sept. 11, 1950

a LOOK at the WEEK

Army now a big plane customer, will spend over \$40 million this year for liaison planes and helicopters. Air Force will handle Army procurement. Total planes bought with \$40 million will be cut by high unit cost of helicopters.

Don't look for government to break out reserve plants and machine tool reserves. They're not needed now in expanded production program.

What suppliers can expect in way of increased orders is seen in production rate to be reached sometime in fiscal 1951: Air Force, 320 planes monthly against 130 pre-Korea; Navy, 200-250 against 85. Rates won't be attained until near fiscal year-end.

Navy showing very encouraging interest in air transport needs, as evidenced by limited orders for DC-6A's and Constellations.

It's still too early to tell how deferment of reservists is working. Commerce and Labor Departments, incidentally, have set up committee to keep essential activities and critical occupations lists under "constant review."

Look for tightening of surplus aircraft engine and accessory disposal policy as result of Congressional pressure.

Prototype aircraft bill, which has been somewhat bogged down in Congress, now given good chance to pass before expected adjournment this week. White House is interested in the bill.

No decision yet on sites for Air Force pilot training by civil contractors. AF surveying civil airports and former AF bases. When sites are selected, contractors will bid. Specifications for bids not expected before end of September.

Airlines, "phasing out" of Korean airlift, start to get planes back this week. Military Air Transport Service taking over. Decision will be made this week which airlines phase out first. Non-skeds will probably be last by choice.

Priority system for airline travel is remote. Airlines can handle present traffic; unusually big military movements would be necessary to upset situation.

No developments in past week on appointment of new CAB chairman. Field still wide open.

12th Week of War

As Korean war enters 12th week, here's the aircraft picture:

Procurement: Entire \$7.5 billion for planes isn't through Congress yet (see Congress) but military has told manufacturers what is required, and prime contractors and suppliers are at work. But—after 11 weeks of war, aircraft industry can hardly be called mobilized. Suppliers and components manufacturers are stepping up; until they start large-scale deliveries, procurement consists largely of preparations.

Planes: Air Force's most critical need is tactical planes. Cargo aircraft, previously ordered in 10's and 20's, now being ordered in hundreds.

Air Force has given Republic top tactical order: F-84E and modernized swept-wing F-84F. Key transport orders: Fairchild C-119, Boeing C-97, Douglas C-124. Other AF ordering goes like this: Boeing B-47, B-50, Convair B-36 bombers; Lockheed F-94, F-94C, North American F-86, F-86D jet fighters, Northrop F-89 jet night fighter.

Navy ordered accelerated production of Grumman AF2S, AF2W anti-sub planes, Douglas A2D attack bomber, Lockheed P2V patrol bomber, Martin P4M, P5M patrol aircraft, Douglas F3D, Grumman F9F, McDonnell F2H jet fighters.

Deliveries: Impact of \$7.5 billion won't be felt immediately as far as air combat potential of services is concerned. Look for peak production about Jan. 1, 1952; first planes under accelerated schedules should reach operational groups shortly before that time.

Materials: Manufacturers are wary of shortages. They may urge mandatory military preference ratings for necessary materials—commercial deliveries apparently still get precedence over aircraft needs. Deliveries of aluminum, steel, lead, kirkite, lumber, plywood are critical or about to become so. Electronics items in acutely short-supply. Aircraft Industries Association set up western Air Materials Committee, will establish one in east, to unify thinking on supply problems, solutions.

Controls: Voluntary controls come first, handled through existing government agencies: materials under Commerce Dept. (Assistant Secretary William Harrison), gas, oil, etc., under Interior, manpower under Labor. However, if and when pinch comes, look for rigid controls, probably handled by a separate agency.

Facilities: No outlook for use of reserve plants unless expansion program gets larger.

Manpower: Skilled help in demand; unskilled workers not needed—airframe plants can't get in full production until flow from suppliers starts. Then employment will rise sharply.

Costs: Definite trend of rising costs for materials and components. Increase is slight so far, but continuation will mean fewer planes for available money or added requests for funds.

Beech Building 600 Aft-Facing Seats

Beech Aircraft Corp. has received an Air Force order for 600 high-stress aft-facing aircraft passenger seats for installation in some Military Air Transport Service planes, probably C-97 Stratofreighters. This is a service test order to determine whether all AF passenger planes will be equipped with rearward facing seats. The new

seat, designed by Air Materiel Command's Aero Medical Laboratory, can withstand a load of 16 g, compared with 6 g for old-type seats.

Most Powerful Turbo-Prop Unveiled

Pratt & Whitney Aircraft Division unveiled its T-34 turbo-prop engine, most powerful yet announced, Sept. 7. The engine, expected to deliver 6,000 hp., has completed a 50-hr. test run at rating of 5,700 hp., or 200 hp. over announced rating of Allison T-40, other large U. S. turbo-prop. T-34's fuel consumption during run was .62 lbs. per horsepower per hour, about the same as the T-40. New engine, being considered for both Navy and AF planes, is a single unit high pressure axial flow turbine.



MANUFACTURERS

Keep C-W Division Open: Air Force is conducting negotiations with a west coast manufacturer to assure that Curtiss-Wright Corp.'s Airplane Division at Columbus will remain open. C-W planned to close because of lack of enough military business.

Navy Orders Liftmasters: Navy has ordered 11 Douglas DC-6A Liftmasters (R6D-1's). The plane, five feet longer than DC-6, grosses 100,000 lbs., is powered by four P&W R-2800 engines and has cruising speed of 292 mph.

Helicopters for Army: One Kaman K-190 and one Hiller 360 helicopter have been bought by the Army for evaluation tests of the commercial craft to determine their suitability for Army use.

48-Hour Week at P&W: Six-day 48-hr. work week has been started by 8,500 of Pratt & Whitney Aircraft Division's 15,000 employees to handle increased military production. Others will switch over as needed. Employment peak of 22,000 to 24,000 expected in 12-18 months, including new Southington plant.

Hardman Seats: Hardman Manufacturing Co., South Gate, Calif., is building seats for last 10 Constellations ordered by Eastern Air Lines plus high-density seats for seven DC-3's which United is converting to 28-place planes.

Adel Name Change: Corporate name of Adel Precision Products Co. has been changed to Adel Division, General Metals Corp., following consolidation with Enterprise Engine and Foundry Co. and General Metals. Fred T. Miller has been named vice president-engineering

and sales, and Richard A. Stumm vice president-manufacturing.

Manufacturing Personnel: Arnold Rosenberg has been named general sales manager of Bendix Radio Division of Bendix Aviation Corp., succeeding J. W. Hammond, transferred to Fairchild Instrument Division. Robert R. Miller resigned as assistant to president of Republic Aviation Corp. to return to private business interests in California.



PLANES & EQUIPMENT

Another XC-120 Prototype: Fairchild XC-120 detachable fuselage experiment appears highly successful, but Air Force will probably order Fairchild to build another prototype for evaluation: a modified version of C-119 Packet, with tricycle instead of quadricycle gear as on XC-120, and possibly turbo-prop engines.

New Turbosupercharger: General Electric Co. has developed a new turbosupercharger, CH9, which offers new fuel economy and power boost for piston engines. Test stand operation with Pratt & Whitney R-4360 "C" series engine showed 32% more take-off power and reduction of more than 20% in fuel consumption. CH9 eliminates conventional geared supercharger, or impeller, operating off the engine shaft, by use of a direct cylinder fuel injection system.



MILITARY

Reserve Commissions Continued: Air Force has reversed policy on reserve commissions previously considered to expire at end of five-year period. About 4,000 commissions which began to expire last June 28 are considered in effect indefinitely, as are all of the approximately 242,000 AF commissions. Policy is based on new interpretation of National Defense Act.

MTS Staff Selected: Military Traffic Service, established by Defense Dept. to provide a uniform traffic service within the department, has named staff members to aid E. G. Plowman, U. S. Steel executive, who is director. Col. A. G. Viney, Army, will be deputy director; F. X. Dunleavy, from Army Transportation Corps, assistant deputy director; Earle Newman, Navy, transportation specialist; Frank Perrin, from Munitions Board, commerce counsel. Headquarters of MTS are Room 2C869, Pentagon; phone Liberty 5-6700, extension 77191.



AIRLINES

Mergers Fail: Merger of Continental Air Lines and Frontier Airlines, big Rocky Mountain feeder system, was discussed informally in late summer, but talks were terminated in early stages when no agreement in principle could be reached. Latest of numerous efforts to merge Continental and Mid-Continent has also failed.

Parks to Carry Mail: Parks Air Lines has been designated by Post Office for carriage of mail on two daily round-trips Chicago-East St. Louis, starting Sept. 15.

Tigers Buy C-46's: Flying Tiger Line was successful bidder in sale of 18 Air Force C-46F's, buying them for \$509,000. Some of the planes are damaged.

Cal Central Adds DC-4: California Central Airlines has added a 77-passenger DC-4 to fleet of five DC-3's used in scheduled California intrastate service, and has bought two C-47's from United Air Lines.

American Aviation

News Issue



Vol. 14 No. 8

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ERIC BRAMLEY, Executive Editor

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Non-Sked Increase: Non-scheduled and contract carriers in and out of LaGuardia Field had 84.4% increase in passengers during first seven months of 1950, says Port of New York Authority. Total was 63,598 against 34,492 in same 1949 period. Scheduled lines increased from 1,862,944 to 1,865,138 in same period.

New Services

United Air Lines will start Los Angeles-Honolulu service Oct. 2 with five weekly schedules.

Aerovias Guest begins scheduled Miami-Mexico City service and through Mexico City-Madrid flights on or about Sept. 11.

Trans-Texas Airways has opened service between Alice and Corpus Christi, Tex.



CIVIL AVIATION

Civil Mobilization Plan: Civil air mobilization plan completed by CAA's Aviation Development Advisory Committee has been accepted by CAA Administrator D. W. Rentzel, who has forwarded it to National Security Resources Board. He expressed the belief that if the plan is put in effect the non-airline aviation industry can continue industrial, executive, agricultural and personal flying and at the same time be ready for an emergency. (Details will appear in Sept. 18 issue).

Civil Aviation Survey: Results of the recent survey of civil (non-airline) aviation personnel, services and facilities available for use in partial or total mobilization have been issued by CAA's Aviation Development Advisory Committee. Results, covering airports and fixed base operators in continental U. S., Alaska and Hawaii, show: airports, 3,959; airport employees (exclusive of fixed base operators), 9,951; fixed base operators, 5,139; FBO employees, 32,132; FBO aircraft, 25,077.

July Plane Shipments: Shipments of one to 10-place planes in July totaled 296 valued at \$1,628,000 against 290 worth \$1,147,000 in same 1949 month, Aircraft Industries Association said. Piper Aircraft Corp. led in number shipped (104).



CONGRESS

Bids on Subsidy Study: Invitations to bid on a contract to conduct a survey of certain parts of the problem of separating air mail pay from subsidies paid domestic airlines were mailed last week to prospective bidders by Senate Interstate and Foreign Commerce Committee, which has \$200,000 for the job. Successful bidder will be asked to perfect committee's interim report which attempted to determine subsidies paid the airlines on a community cost basis. Bids due Sept. 23, and report of the survey, including profit and loss statements of individual airline stations throughout U. S., due Feb. 28, 1951.

Aluminum Production: General Services Administration asked Senate Appropriations Committee for boost from \$6,000,000 to \$14,000,000 to reactivate metal plants, and authority to spend up to \$6,000,000 to transfer government-owned aluminum fabricating equipment to private concerns.

Bills Passed

- Fiscal 1951 Omnibus Appropriation bill carrying \$1,565,000,000 for Air Force and \$733,600,000 for Navy aircraft procurement, funds for CAB, CAA and NACA, and \$1,678,023,729 in Mutual Defense Assistance Pact money.
- Resolution giving military services go signal on emergency production ahead of final disposition of \$16,771,000,000 sup-

plemental appropriation bill now before Senate Appropriations Committee, which includes \$2,777,300,000 for Air Force and \$1,596,269,000 for Navy aircraft procurement and \$4,000,000,000 in MDAP money.

- Air security bill for identification, location and control of all aircraft in defense areas.

Bills Pending

- Prototype aircraft testing bill, S. 3504, on House calendar after passing Senate.
- H. R. 780, permitting delegation of authority by CAA to airline and aircraft manufacturing inspectors, on House calendar after passing Senate.
- H. R. 9184, requiring separation of mail pay from subsidy payments by July 1, 1951, on House calendar.



CIVIL AERONAUTICS BOARD

Pioneer Extended: In a policy-setting decision, CAB has extended Pioneer Air Lines' certificate for most of its feeder routes until Sept. 30, 1954. Said CAB: "Only certificates covering routes which offer substantial public benefits and hold promise of future economic soundness will be further extended." Extended for four years were Pioneer's Houston-Amarillo, Houston-Dallas, and Dallas-Midland/Odessa segments, and for one year Lubbock-Albuquerque. Pioneer was given an alternate leg Austin-Houston; the "weak" El Paso-Amarillo route was terminated. American Airlines was suspended at Abilene and Big Spring, Continental at Big Spring (both served by Pioneer). Following suspensions which had been proposed were not ordered: AA at Midland-Odessa, Braniff at Lubbock and Waco, and Continental at Las Vegas, N. M.

• **Turner Airlines** received seven-month CAB okay to provide feeder service to Kokomo and Richmond, Ind. CAB action followed termination of certificate authorizations of TWA to serve Richmond and Delta to serve both cities. To give Turner time to start, CAB extended Delta's authorization 30 days. Turner's approval continues until CAB disposition of company's certificate renewal.

• **Golden North Airways'** letter of registration has been revoked by CAB, effective Oct. 1. Company conducted excessive operations between Seattle and Alaska, CAB said.

• **National Airlines** has again asked CAB approval of day-light DC-6 New York-Miami coach flight, starting Oct. 1, at \$58 one-way.

• **American Air Cargo Inc.** applied for cargo-mail route between Miami and New Orleans and Barranquilla, Colombia via intermediate points. C-46's would be used. AAC president is **D. G. Richardson**, who is also Aerovias Guest's operations manager.

• **Pan American World Airways** asked CAB to withdraw its denial of PAA's application for Boston-New York-Miami domestic route and hold it in abeyance until final decision in National Airlines' "dismemberment" case. CAB could thus keep open possibility of certificating PAA if this appears best course to follow after NAL decision, PAA said. NAL asked CAB to dismiss everything in proceeding except interchange and stock option agreements.

• **Northwest Airlines'** request to suspend service at Aberdeen, S. D., raises issues warranting a hearing on the matter, CAB ruled. NWA claims suspension would save it \$302,000 annually. Mid-Continent also serves the city.

CAB Calendar

Sept. 12—Hearing in Pan American World Airways Fairbanks-Seattle Space Available Fare Investigation. 10 a. m., Room 4823, Commerce Building, Washington, D. C. Examiner F. Merritt Ruhlen. (Docket 4508).

Sept. 14—Oral argument in Meteor Air Transport Revocation Proceeding. 10 a. m., Room 5042, Commerce Building, Washington, D. C. (Docket 4100).

Sept. 18—Oral argument in Michigan-Wisconsin Service Case. 10 a. m., Room 5042, Commerce Building, Washington, D. C. (Docket 2832 et al.).

Sept. 18—Hearing in Philadelphia Service Suspension Case (International Routes). Tentative. Place and hour to be announced. Examiner Herbert K. Bryan. (Docket 4228 et al.).

LABOR

GE Strike: Strike of General Electric Co. workers has stopped J-47 jet engine production at Everett and Lynn, Mass.

UAL Award: In a step which may set a pattern for other airlines, National Mediation Board announced an arbitration award granting three classes and crafts of United Air Lines' employees wage increases of from 4 to 6c an hour and providing a 50% reduction in wage progression steps by Dec. 30, 1950. Increase of 6c goes to personnel receiving minimum of \$1.50 an hour, 4c to all others in classes of mechanics, ramp and stores, dining service. Award is retroactive to Jan. 1, 1950.

Braniff Recommendations: Presidential Fact Finding Board (decision not binding) submitted 66 recommendations in dispute between Braniff Airways and 1,100 clerical and other workers represented by Brotherhood of Railway Clerks. Working rules, not wages, was the issue. Board gave great weight to similar rules which have been negotiated in airline industry. Union had based proposals on railroad rules.

ACMA Takes Over: Regarded as a favorable move by many airline officials, Air Carrier Mechanics Association, ALPA affiliate, appears scheduled to replace Airline Mechanics Department of CIO-UAW as bargaining agent for Western Air Lines' mechanics. Most workers switched to new union and CIO affiliate relinquished certificate. Officials favor ACMA because it's strictly an airline union.

WAL Strike Vote: Brotherhood of Railway Clerks is taking strike vote on Western Air Lines following failure of mediation. Union wants 20c an hour wage increase.

ALPA Request: Air Line Pilots Association asked National Mediation Board to mediate dispute on ALPA proposals for supplemental contracts covering TWA and American pilots engaged in military charter work.

EAL, Capital Mediation: National Mediation Board will meet with Eastern Air Lines and International Association of Machinists in another attempt to settle a wage contract with 2,700 ground employees, who have authorized a strike. NMB has assigned P. D. Harvey to mediate differences between Capital Airlines and IAM maintenance workers.

FINANCIAL

Menasco Profit: Menasco Manufacturing Co. reports \$134,003 net profit after taxes for fiscal year ended June 30, 1950. Backlog on Aug. 15 totaled \$5,514,572, with 97.5% consisting of subcontracts for military aircraft landing gear. Company has negotiated with RFC the purchase (for \$725,000) of that part of the plant and equipment of its Burbank, Calif., facility which it did not own.

Profit for Parker: Parker Appliance Co. had \$246,075 net income for fiscal year ended June 30, on sales of \$7,101,501, against a fiscal 1949 loss of \$156,827.

Piedmont Loss: Piedmont Aviation reports net loss of \$55,852 after taxes for 1949, boosting accumulated deficit to \$114,145. Report, covering both airlines and fixed base division, was delayed by CAB auditing. Company had operating profit of \$51,858 which was changed to loss by non-operating expenses such as amortization of pre-operating expenses and capital stock expense.

Special Bendix Dividend: Bendix Aviation Corp. has declared a special \$1 dividend in addition to 75c quarterly dividend on common stock, both payable Sept. 30 to stockholders of record Sept. 9.

TEMCO Stock Increase: Texas Engineering and Manufacturing Co. has voted to increase authorized common stock from 500,000 to 895,760 shares. Directors also voted a stock dividend of one share of common for each share held by stockholders, payable Sept. 15 to stockholders of record Sept. 5.

IN GENERAL

Parcel Post Boost: Outlook is pessimistic over Nov. 1 increase in air parcel post rates. Post Office hopes increase will produce \$2 million more revenue, but volume drop may wash this out. Shipments of pound or less (comprising 50% of volume) aren't affected except in short-haul zones, and may hold up. Drop will come in other 50%, where rates are up sharply.

O'Connell Joins Law Firm: Joseph J. O'Connell, Jr., former Civil Aeronautics Board chairman, has joined Chapman, Bryson and Walsh law firm, 30 Broad St., New York, and will be Washington resident partner. New firm name is Chapman, Bryson, Walsh and O'Connell.

AROUND THE WORLD

Key British Changes: Air Vice-Marshal J. N. Boothman is taking over as Controller of Supplies (Air), British Ministry of Supply, from Air Marshal Sir Alec Coryton, who becomes chief executive of the MOS Guided Weapons Division.

DC-6 for LAI: Linee Aeree Italiane has received from Douglas Aircraft Co. the first of three DC-6's ordered for Rome-New York service. LAI started service July 5 using DC-6's leased from FAMA, Argentine line.

BEA Reduces Loss: British European Airways had loss of \$3,818,063 for fiscal year ended Mar. 31, 1950, compared with \$7,736,638 in previous fiscal year. Net deficit, after profit from transactions relating to previous years, was \$3,670,301.

OFF THE PRESS

Jet Propulsion—Turbojets, by Volney C. Finch, mechanical engineering professor, Stanford University. Published by National Press, Millbrae, Calif. 336 pages. \$5.50.

COMING UP

Sept. 12-14—Conference on ground facilities for air transportation, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Sept. 15-17—Instrument Society of America instrument maintenance clinic, New York State Institute of Applied Arts and Sciences, Buffalo, N. Y.

Sept. 18-22—Fifth national instrument conference and exhibit, Memorial Auditorium, Buffalo, N. Y.

International

Sept. 14—ICAO Airworthiness/Operations meeting, Paris.

Sept. 19—ICAO Air Navigation Commission meeting, Montreal.

Sept. 27—ICAO Council meeting (11th Session), Montreal.